

-- STATE OF NORTH CAROLINA--DEPARTMENT OF TRANSPORTATION RALEIGH, N.C.

STEP 1 PROPOSAL



DATE AND TIME OF TECHNICAL AND PRICE PROPOSAL SUBMISSION: October 18, 2004 AT THE TIME DESIGNATED FOR ORAL INTERVIEWS (SEE SPECIAL PROVISIONS)

DATE AND TIME OF PRICE PROPOSAL OPENING: October 19, 2004 AT 10:00 AM

CONTRACT ID:

C 201320

WBS ELEMENT NO.

112.104401

FEDERAL-AID NO.

ER-NC05(2)

COUNTY:

HAYWOOD

ROUTE NO. I-40

MILES: 0.412

LOCATION: I-40 BETWEEN MILE MARKERS 3 AND 4

TYPE OF WORK:

GRADING, DRAINAGE, PAVING AND RETAINING WALL

NOTICE:

ALL PROPOSERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE PROPOSER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. PROPOSERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA.

5% BID BOND OR BID DEPOSIT REQUIRED

PROPOSAL FORM FOR THE CO	ONSTRUCTION OF CONTRACT NO. <u>C201320</u>
IN HAYWOOD COUNTY	NORTH CAROLINA
	Date20
DEPARTMENT OF TRANSPO	RTATION,
RALEIGH, NORTH	[CAROLINA
which are acknowledged to be placed form of contract, and the forms and thoroughly understands undersigned bidder agrees to be him by the Board of Transponecessary contract payment be after the written notice of awagrees to provide all necessary and to do all the work and to find the perform and complete the Specifications for Roads and Provisions and in accordance	examined the location of the proposed work to be known as; has carefully examined the plans and specifications, art of the proposal, the special provisions, the proposal, the of contract payment bond and contract performance bond; the stipulations, requirements and provisions. The ound upon his execution of the bid and subsequent award to ortation in accordance with this proposal to provide the ond and contract performance bond within fourteen days ard is received by him. The undersigned Bidder further machinery, tools, labor, and other means of constructions urnish all materials, except as otherwise noted, necessary to said contract in accordance with the 2002 Standard structures by the dates(s) specified in the Project Special with the requirements of the Engineer, and at the unit on any be, for the various items given on the sheets contained
	e and furnish all the materials, machinery, implements rm the work and required labor to construct and complete C201320
Bidder in his bid and according	the unit or lump sum prices, as the case may be, bid by the to the proposal, plans, and specifications prepared by said plans, and specifications show the details covering this part of this contract

The published volume entitled "North Carolina Department of Transportation, Raleigh, Standard Specifications for Roads and Structures, January 2002 with all amendments and supplements thereto, is by reference incorporated into and made a part of this contract; that, except as herein modified, all the Construction and work included in this contract is to be done in accordance with the specifications contained in said volume, and amendments and supplements thereto, under the direction of the Engineer.

If the proposal is accepted and the award is made, the contract is valid only when signed either by the Contract Officer or such other person as may be designated by the Secretary to sign for the Department of Transportation. The conditions and provisions herein cannot be changed except over the signature of the said Contract Officer.

The quantities shown in the itemized proposal for the project are considered to be approximate only and are given as the basis for comparison of bids. The Department of Transportation may increase or decrease the quantity of any item or portion of the work as may be deemed necessary or expedient.

An increase or decrease in the quantity of any item will not be regarded as sufficient ground for an increase or decrease in the unit prices, nor in the time allowed for the completion of the work, except as provided for the contract.

Accompanying this bid is a bid bond secured by a corporate surety, or certified check payable to the order of the Department of Transportation, for five percent of the total bid price, which deposit is to be forfeited as liquidated damages in case this bid is accepted and the Bidder shall fail to provide the required payment and performance bonds with the Department of Transportation, under the condition of this proposal, within 14 calendar days after the written notice of award is received by him, as provided in the Standard Specifications; otherwise said deposit will be returned to the Bidder.

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PROJECT SPECIAL PROVISIONS

General

7-1-95

CONTRACT TIME AND LIQUIDATED DAMAGES:

 $8-15-00_{R}$

The date of availability for this contract is November 1, 2004, except that work in jurisdictional waters and wetlands shall not begin until a meeting between the DOT, Regulatory Agencies, and the Contractor is held as stipulated in the permits contained elsewhere in this proposal. This delay in availability has been considered in determining the contract time for this project.

The completion date for this contract is June 1, 2005.

When observation periods are required by the special provisions, they are not a part of the work to be completed by the completion date and/or intermediate contract times stated in the contract. Should an observation period extend beyond the final completion date, the acceptable completion of the observation period shall be a part of the work covered by the performance and payment bonds.

The liquidated damages for this contract are One Thousand Dollars (\$1,000.00) per calendar day. These liquidated damages will not be cumulative with any liquidated damages which may become chargeable under Intermediate Contract Time Number 1.

SP1G07

<u>INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES A+B BIDDING:</u>

10-12-04

The Contractor shall complete the proposed retaining walls at Station 17+00 to Station 22+25 and Station 33+00 to 35+00, pavement, guardrail, temporary pavement markings, signs, and shall place and maintain traffic in its permanent pattern on I-40 East Bound Lane.

The date of availability for this intermediate contract time is November 1, 2004.

The intermediate contract time for this work shall be determined by the Bidder and entered onto the itemized proposal form by the Bidder in the place indicated. In no case shall the Bidder bid more than 134 (March 14, 2005) consecutive calendar days.

The daily cost for this intermediate contract time is Seven Thousand Dollars (\$7,000.00) per calendar day.

The liquidated damages for this intermediate contract time are Seven Thousand Dollars (\$7,000.00) per calendar day.

The 2002 Standard Specifications for Roads and Structures shall be revised for Intermediate Contract Time Number 1 as follows:

Page 1-5, Article 101-46. Delete the article and substitute the following:

101-46 INTERMEDIATE COMPLETION DATE.

That date as determined by adding the number of calendar days bid by the Contractor to the date of availability, or as revised by authorized extensions, by which date it is required that the intermediate work set forth in the contract will be satisfactorily completed. The date of availability will be counted as the first contract calendar day.

Page 1-5, Article 101-48. Delete the article and substitute the following:

101-48 INTERMEDIATE CONTRACT TIME (DAYS)

The number of days bid by the Contractor including authorized extensions to the intermediate completion date.

Page 1-13, Article 102-8 (4) Add the following paragraph after the second subparagraph:

The intermediate contract time bid shall be entered in the proposal form. The number of calendar days shall be entered in figures in the "Unit Cost" column. The amount bid for the contract time will be determined by multiplying the number of calendar days bid by the daily cost per calendar day indicated in the proposal form and shall be the amount appearing in figures in the "Amount" column of the proposal form.

Page 1-13, Article 102-8 Delete paragraph 5 and substitute the following:

5. The total amount bid shall be determined by adding the amounts bid for each item and for the contract time.

Page 1-15, Article 102-11. Delete the first three sentences of the first paragraph and substitute the following:

The bid shall be accompanied by a corporate bid bond or a bid deposit of a certified or cashiers check in the amount of at least 5% of the total amount bid for the contract excluding the amount bid for the contract time. No bid will be considered or accepted unless accompanied by one of the foregoing securities. The bid bond shall be executed by a Corporate Surety licensed to do business in North Carolina and the certified check or cashiers check shall be drawn on a bank or trust company insured by the Federal Deposit Insurance Corporation and made payable to the Department of Transportation in an amount of at least 5% of the total amount bid excluding the amount bid for the contract time.

Page 1-17, Article 102-15. Add the following paragraph after the first paragraph:

Any bid submitted in which the Bidder fails to bid the intermediate contract time or bids more intermediate contract time than specified in these provisions shall be considered irregular and may be rejected.

Page 1-18, Article 103-1. Delete the first paragraph and substitute the following:

After the bids are opened and read, they will be compared on the basis of the summation of the products of the quantities shown in the bid schedule and the unit bid prices and the product of the cost per calendar day shown in the bid schedule and the contract time. The results of such comparisons will be immediately available to the public.

Page 1-20, Subarticle 103-4(A). Delete this subarticle in its entirety and substitute the following:

The award of the contract, if it be awarded will be made to the lowest responsible Bidder. In determining the total amount bid by a Bidder, the Department will consider the dollar amount bid to perform all the work under the terms of the contract and the total number of calendar days to complete the work. The lowest bid will be determined by the Department as the lowest combination of (A) and (B) according to the following formula:

Total Amount Bid = $A + (B \times DC)$ where

A is the total dollar amount for all work to be performed under The contract,
B is the time in calendar day's bid not to exceed the maximum number of calendar days specified in the proposal, and DC is the daily cost as stipulated in the proposal.

The preceding formula shall be used only to determine the lowest and best bid and <u>shall</u> not be used to determine the final payment to the Contractor upon completion of the work.

In the event that two or more Bidders submit the lowest total bid, the award, if made, will be made to the Bidder bidding the lowest number of calendar days to complete the work.

The lowest responsible Bidder will be notified by letter that his bid has been accepted and that he has been awarded the contract.

Award of a contract involving any unbalanced bid price(s) may be made in accordance with the provisions of Article 102-15.

Page 1-61, Subarticle 108-10(B), Paragraph 1. Delete this paragraph in its entirety and substitute the following:

1. If the total dollar value of the final quantities adjusted as provided herein less the dollar value of quantities represented by supplemental agreements which previously extended the completion date, or intermediate completion time, exceeds the dollar value of the total amount bid, excluding the amount bid for contract time or intermediate contract time, the completion date, intermediate completion date or intermediate completion time will be extended by the number of calendar days or hours obtained by multiplying the contract time (days), intermediate contract time (days) or intermediate contract time (hours) as bid or set forth in the special provisions by that percentage that such reduced final dollar value exceeds the total amount bid, excluding the

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amount bid for contract time or intermediate contract time. The total dollar value of the final quantities for pro-rata computations shall be adjusted by excluding the following:

- a. Unit bid price changes caused by price adjustments to asphalt cement.
- b. Fuel adjustments.
- c. Unit price reductions under the provisions of Article 105-3.
- d. Payment for trainees.
- e. Unit price changes due to pay factors established by the Specifications.

Page 1-63, Subarticle 108-10(B). Delete the first full paragraph and substitute the following:

The Contractor's plea that the maximum allowable contract time (days), intermediate contract time (days), or intermediate contract time (hours) as specified in the contract was insufficient will not be considered grounds as a valid extension in the completion date, intermediate completion date or intermediate completion time.

Page 1-63, Article 108-11. Insert "as bid or" after the word "times" in the third line of the second paragraph.

Page 8-1, Article 800-2. Insert "excluding the amount bid for contract time or intermediate contract time" following the phrase "percent of the total amount bid" throughout the article.

INTERMEDIATE CONTRACT TIME NUMBER 2 AND LIQUIDATED DAMAGES:

09-16-03

The Contractor shall complete the required work of installing, maintaining, and removing the traffic control devices for lane closures and restoring traffic to the existing traffic pattern. The Contractor shall not close or narrow a lane of traffic on **I-40 East Bound Lane** during the following time restrictions:

DAY AND TIME RESTRICTIONS Friday through Sunday 12:00 p.m. (noon) TO 12:00 a.m. (midnight)

In addition, the Contractor shall not close or narrow a lane of traffic on **I-40 East Bound Lane**, detain and/or alter the traffic flow on or during holidays, holiday weekends, special events, or any other time when traffic is unusually heavy, including the following schedules:

HOLIDAY AND HOLIDAY WEEKEND LANE CLOSURE RESTRICTIONS:

- 1. For any event that creates unusually high traffic volumes, as directed by the Engineer.
- 2. For **New Year's Day**, between the hours of 12:00 p.m. December 31st and 12:00 a.m. January 2nd. If New Year's Day is on Saturday or Sunday, then until 12:00 a.m. the following Tuesday.

- 3. For **Easter**, between the hours of 12:00 p.m. Thursday and 12:00 a.m. Monday.
- 4. For **Memorial Day**, between the hours of 12:00 p.m. Friday and 12:00 a.m. Tuesday.
- 5. For **Independence Day**, between the hours of 12:00 p.m. the day before Independence Day and 12:00 a.m. the day after Independence Day.

If Independence Day is on a Saturday or Sunday, then between the hours of 12:00 p.m. the Thursday before Independence Day and 12:00 a.m. the Tuesday after Independence Day.

6. For **Labor Day**, between the hours of 12:00 p.m. Friday and 12:00 a.m. Tuesday.

Holidays and holiday weekends shall include New Years, Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. The Contractor shall schedule his work so that lane closures are not required during these periods, unless otherwise directed by the Engineer.

The time of availability for this intermediate contract work shall be the time the Contractor begins to install all traffic control devices for lane closures according to the time restrictions listed above.

The intermediate completion time for this intermediate contract work shall be the time the Contractor is required to complete the removal of all traffic control devices for lane closures according to the time restrictions stated above and place traffic in the existing traffic pattern.

The liquidated damages are **Two Thousand Dollars** (\$2,000.00) per hour time period.

RG07

RETAINING WALL SYSTEM

10-14-04

DESCRIPTION

This work shall consist of a two step process:

1. Step one shall consist of providing a technical proposal, schedule, and cost proposal for constructing a retaining wall system or an alternate retention system, and a concept for a toe scour protection system by selected geotechnical subcontractors.

If the geotechnical subcontractor submits a technical proposal of an alternate retention system, it shall be in accordance with the requirements shown in the Geotechnical Engineering Scope of Work. He shall submit the items, quantities and specifications to accompany the alternate retention system and shall submit a bid on Alternate Retention System @ slide 1 and/or Alternate Retention System @ slide 2.

The time of the scheduled oral presentations on October 18, 2004 in the Geotechnical Conference Room, Century Center, Building B will be:

Time	Subcontractor
9:00-10:00 a.m.	Brayman Construction Company
10:30 – 11:30 a.m.	Hayward Baker
12:00 – 1:00 p.m.	Richard Goettle, Inc.
2:00-3:00 p.m.	Schnabel Foundation Company

The Department will choose one geotechnical subcontractor to work on this project.

2. Step two shall consist of submitting a bid on the entire project, after review of the successful geotechnical subcontractor's technical proposal, schedule, and cost proposal by the selected prime contractors. The successful prime contractor subsequently shall enter into a subcontract with the successful geotechnical subcontractor chosen by the Department.

3. Selected prime contractors and selected geotechnical subcontractors

The selected prime contractors and selected geotechnical subcontractors invited to bid on this project are as follows:

Selected Prime Contractors	Selected Subcontractors		
Blalock and Sons	Brayman Construction Company		
Phillips and Jordan	Hayward Baker		
Taylor and Murphy	Richard Goettle, Inc.		
Wright Brothers	Schnabel Foundation Company		

GEOTECHNICAL SUBCONTRACTOR SUBMITTALS:

1. Bidding Requirements for geotechnical subcontractors

The proposed subcontractor shall submit a fully executed bid bond; the bid bond shall remain in effect until the Department has executed a contract with the prime contractor. The subcontractors shall submit a fully executed non-collusion affidavit and debarment certification with their cost proposal.

The geotechnical subcontractor shall bid on the following items only:

Pay Unit
Square Feet
Cubic Yard
Lump Sum
Square Feet
Ton
Cubic Yard
Lump Sum

2. Submittal and Presentation of Technical Proposals and Cost Proposals

The Department will receive the technical proposal and cost proposal at the oral interviews on October 18, 2004 beginning at 9:00 a.m. See timeline for specific geotechnical subcontractor oral interview times. The cost proposal will be opened within 24 hours of the last presentation. The Department will choose and notify the successful geotechnical subcontractor based on criteria shown elsewhere in this provision on October 20, 2004.

3. Evaluations

Contract C201320

The geotechnical subcontractor shall submit a technical proposal no later than October 18, 2004 at the scheduled oral presentation. The purpose of the technical proposal is to document the geotechnical subcontractor's understanding of the retaining wall system, selection of appropriate design criteria, and approach for completing all design and construction activities for the proposed retaining wall system. The geotechnical subcontractor's technical proposal shall be developed using narratives, tables, charts, plots, drawings and sketches as appropriate.

The Technical Review Committee will consider the understanding of the project, the anticipated problems and the solutions to those problems.

The selection of the geotechnical subcontractor and the design does not in any way imply that the Department accepts or approves the details of the technical proposal submitted by the geotechnical subcontractor.

Decisions based on cost alone will not establish the design standards for the project. The proposal will be evaluated in each of the following areas:

	EVALUATION FACTOR	POINTS
1.	Safety Plan	30
2.	Schedule and Milestones	25
3.	Long term Maintenance	20
4.	Innovation	10
5.	Environmental Stewardship	10
6.	Oral Interview	5

A. Technical Proposal Evaluation Criteria

- 1. Safety Plan–30 points
 - Describe the safety aspects of the geotechnical subcontractor's design concepts and construction phasing.
 - Describe how to insure safety of the traveling public
 - Discuss the geotechnical subcontractor's overall approach to safety.
 - Safety Insurance Rating and Workman's Compensation

2. Schedule and Milestones - 25 points

Provide a schedule for the project including both design and construction of the retaining wall system. The schedule shall show the sequence and continuity of operations, as well as the date of delivery of the retaining wall system.

The schedule shall also include the geotechnical subcontractor's final completion date. This date shall be clearly indicated on the Project Schedule and labeled *Final Completion Date for Retaining Wall System*.

3. Long Term Maintenance -20 points

Identify and discuss all aspects of the durability of the proposed retaining wall system and its components

4. Innovation – 10 points

Identify any aspects of the design or construction elements that the geotechnical subcontractor considers innovative. Include a description of alternatives that were considered whether implemented or not.

5. Environmental Stewardship – 10 points

Describe the geotechnical subcontractor's approach to addressing environmental concerns within the project boundaries such as the Normal High Water Line as shown on the plans.

Identify efforts to minimize impacts in the Pigeon River and other environmentally sensitive areas. Describe any temporary impacts and associated minimization approaches.

6. Oral Interview – 5 points

Content

The geotechnical subcontractor shall present a brief introduction of the geotechnical subcontractor's team and design/construction approach.

Introductory comments shall be held to no more than 15 minutes.

The Department will use this interview to ask specific questions about the geotechnical subcontractor's background, philosophies, and approach to the project.

Presentation, questions, and answers shall not exceed 60 minutes. No more than 8 people from the geotechnical subcontractor's team may attend.

Design Features

Show plan view and cross-sections of the design concepts with key elements noted.

Show typical sections for the proposed systems.

Identify the appropriate design criteria for each feature if not provided.

Identify any deviations, including proposed design exceptions, from the established design criteria that will be utilized. Explain why the deviation is necessary.

Identify any special aesthetics considerations that will be part of the design.

The Department will use the information presented in the oral interview to assist in the evaluation of the technical proposal.

B. Selection Procedure

There will be a Technical Review Committee (TRC) composed of Project Managers, and three or more senior personnel from involved engineering groups that will evaluate the geotechnical subcontractor's technical proposal on the basis of the criteria provided in the geotechnical subcontractor's package.

The selection of a geotechnical subcontractor will involve both technical quality and price. The technical proposals will be presented to the TRC for evaluation. The TRC will determine whether the proposals are responsive based on the rating criteria herein. The TRC will submit an overall technical proposal score for each geotechnical subcontractor to the Contract Officer. A maximum quality credit percentage will be assigned for each project, as determined by the TRC.

Quality Credit Evaluation Factors for Technical Proposals

Safety Plan	30
Schedule and Milestones	25
Long term Maintenance	20
Innovation	10
Environmental Stewardship	10
Oral Interview	5
Maximum Score	100

The Contract Officer will use a table based on the maximum quality credit percentage to assign a Quality Credit Percentage to each proposal based on the proposal's overall technical score. The maximum percentage for this project will be 60%.

Quality Credit Percentage for Technical Proposals

Technical Score	Quality Credit (%)	Technical Score	Quality Credit (%)
100	60.00	84	28.00
99	58.00	83	26.00
98	56.00	82	24.00
97	54.00	81	22.00
96	52.00	80	20.00
95	50.00	79	18.00
94	48.00	78	16.00
93	46.00	77	14.00
92	44.00	76	12.00
91	42.00	7 5	10.00
90	40.00	74	8.00
89	38.00	73	6.00
88	36.00	72	4.00
87	34.00	71	2.00
86	32.00	70	0.00
85	30.00		

If any of the technical proposals were considered non-responsive, the Contract Officer will notify those geotechnical subcontractors of that fact. The Contract Officer shall publicly open the sealed price proposals and multiply each geotechnical subcontractor's price proposal by the Quality Credit Percentage earned by the geotechnical subcontractor's technical proposal to obtain the Quality Value of each geotechnical subcontractor's technical proposal. The Quality Value will then be subtracted from each geotechnical subcontractor's price proposal to obtain an Adjusted Price based upon Price and Quality combined. The geotechnical subcontractor having the lowest adjusted price be selected for use on this project (Contract C201320). The successful geotechnical subcontractor's name, technical proposal and cost proposal will be given to the 4 (invited to bid) prime contractors for their information prior to submittal of their bid.

The following table shows an example of the calculations involved in this process.

As Example of Calculating Quality Adjusted Price Ranking

Proposal	Technical Score	Quality Credit (%)	Price Proposal (\$)	Quality Value (\$)	Adjusted Price (\$)
A	93	46.00	3,000,000	1,380,000	1,620,000
В	90	40.00	2,900,000	1,160,000	1,740,000
C *	95	50.00	2,800,000	1,400,000	1,400,000
D	80	20.00	2,700,000	540,000	2,160,000
E	70	0.00	2,600,000	0	2,600,000
Successful g	eotechnical subc	ontractor – Cont	ract Cost \$2,800,	000	

REVISION TO PROPOSAL

The four prime contractors will be given the successful subcontractor's name, technical proposal, schedule and cost proposal in the form of a revision to this proposal.

PRIME CONTRACTORS' ADDITIONAL BIDDING REQUIREMENTS

- 1. For this contract, the Contractor shall submit a bid bond and fully executed payment and performance bonds with his bid.
- 2. Additionally the Contractor shall submit with his proposal a fully executed non-collusion affidavit and debarment certification.
- 3. The prime contractor shall submit his bid, by completing all entries of the bid item sheet.
- 4. The requirement contained in Section 108-6 for performing at least 35% of this project with the Contractor's own organization is hereby waived for this project.
- 5. Temperature requirements for paving and seasonal limitations will be waived when directed by the Engineer.
- 6. The preconstruction conference will be held on October 27, 2004 at the Haywood Maintenance Center at 10:00 a.m.

STIPEND

A stipulated fee of \$3000 may be awarded to each (invited-to-bid) geotechnical subcontractor who provides a responsive, but unsuccessful, proposal. If a contract award is not made, all responsive (invited-to-bid) geotechnical subcontractors may receive the stipulated fee. The stipulated fee shall be paid to eligible (invited-to-bid) geotechnical subcontractors within ninety days after the award of the contract or the decision not to award.

Once award is made, unsuccessful (invited-to-bid) geotechnical subcontractors will be notified of the opportunity to apply for the stipulated fee.

If the (invited-to-bid) geotechnical subcontractor accepts the stipulated fee, the Department reserves the right to use any ideas or information contained in the proposals in connection with any contract awarded for the project, or in connection with any subsequent procurement, with no obligation to pay additional compensation to the unsuccessful (invited-to-bid) geotechnical subcontractor.

Unsuccessful (invited-to-bid) geotechnical subcontractors may elect to refuse payment of the stipulated fee and retain any rights to its proposal and the ideas and information contained therein.

REMOVE AND STOCKPILE EXISTING PORTABLE CONCRETE BARRIER

10-14-04

Description

The Contractor shall carefully remove existing portable concrete barrier as indicated in the Traffic Control phasing and neatly stockpile it at the Cotton Patch – Mile Marker 6.

Method of Measurement

The quantity of remove and stockpile existing portable concrete barrier to be paid for will be the actual number of linear feet of portable concrete barrier which has been satisfactorily removed and stockpiled. Measurement will be made along the top of the barrier. Measurement will be made prior to removing the portable concrete barrier.

Basis of Payment

The quantity of remove and stockpile existing portable concrete barrier measured as provided above will be paid for at the contract unit price per linear foot for "Remove and Stockpile Portable Concrete Barrier". Such price and payment will be full compensation for removing, stockpiling and all other incidentals necessary to complete the work.

Payment will be made under:

Pay ItemPay UnitRemove and Stockpile Portable Concrete BarrierLinear Foot

TRAFFIC CONTROL PHASING

10-14-04

Complete Step 1 according to Intermediate Contract Time #1. See Intermediate Contract Time #1 for times and liquidated damages.

STEP 1:

Complete all necessary work in the eastbound direction of I-40 including but not limited to or as directed by the Engineer:

- Retaining walls
- Milling
- Paving
- Installing Barrier Rail or Guardrail
- Temporary paint pavement markings

STEP 2:

Shift eastbound traffic to eastbound I-40 outside lane using Roadway Standard 1101.02 Sheet 3 of 7 and 4, 6 and 7 if needed. Traffic will then be in a one lane-one way pattern in each direction. Simultaneously close crossovers to traffic using drums and barricades. Remove any conflicting markings applied during crossover usage by means approved by the Engineer and if necessary, remove crossovers as approved by the Engineer.

Contract C201320

Use Roadway Standard 1101.02 Sheet 3 of 7 and 4, 6 and 7 if needed, and remove portable concrete barrier in the westbound lane. Stockpile the Portable Concrete Barrier at storage area Mile Marker 6. Simultaneously replace Portable Concrete Barrier with drums to keep inside westbound and eastbound lane closed until the damaged median barrier is repaired in STEP 3.

STEP 3:

Repair any damaged median barrier while traffic is in a one lane-one way pattern in each direction. Once the median barrier is repaired, I-40 eastbound and westbound traffic may be opened to existing multilane pattern and temporary lane closure traffic control devices removed.

STEP 4:

Use Roadway Standard 1101.02 Sheet 3 of 7 and 4, 6 and 7 if needed, and close outside lane of eastbound I-40 and install rock buttresses and remove access roads.

STEP 5:

Use Roadway Standard Drawings 1101.02 Sheets 3, 4, 6 and 7 of 7 and apply final pavement markings and markers for westbound and eastbound I-40.

STEP 6:

Once construction is complete remove all traffic control devices and place traffic in existing pattern.

SAFETY INDEX RATING:

6-18-02

Revise the 2002 Standard Specifications as follows:

Page 1-10, Article 102-2

Before the last paragraph on this page, add the following paragraph:

"All subcontractors performing work for the Department shall have received a passing grade on the Safety Index Rating form, in accordance with Article 102-2, prior to beginning work. Subcontractors can request the Safety Index Rating form from the State Contractual Services Engineer."

SP1G14

NO MAJOR CONTRACT ITEMS:

2-19-02

None of the items included in this contract will be major items. (See Articles 101-54 and 104-5 of the Standard Specifications).

SP1G31

NO SPECIALTY ITEMS:

7-1-95

None of the items included in this contract will be specialty items (See Article 108-6 of the Standard Specifications).

SP1G34

EXECUTION OF SIGNATURE SHEETS AND DEBARMENT CERTIFICATION:

9-18-01

The Bidder's attention is directed to the various sheets in the proposal form which are to be signed by the Bidder. A list of these sheets is shown below. The signature sheets are located behind the item sheets in the proposal form. The bid bond is inserted in the proposal form.

- 1. Applicable Signature Sheets: 1, 2, 3, 4, 5, or 6 (Bid)
- 2. Bid Bond (Proposal Insert)

The Bidder shall certify his and to the best of his knowledge all subcontractors, material suppliers and vendors utilized herein current status concerning suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency, in accordance with the "Debarment Certification" located behind the signature sheets in the proposal forms. Execution of the bid signature sheets in conjunction with any applicable statements concerning exceptions, when such statements have been made on the "Debarment Certification", constitutes the Bidders certification of "status" under penalty of perjury under the laws of the United States.

D1G17

SUBMISSION OF BIDS:

6-16-92

The Bidder's attention is directed that each Bidder's Bid <u>shall</u> comply with the following requirements in order for that bid to be responsive and considered for award.

- 1. The Bidder shall be prequalified with the Department prior to submitting a bid.
- 2. The Bidder shall deliver the bid to the place indicated in the Specifications and prior to the time indicated in the proposal form.
- 3. The bid documents shall be signed by an authorized employee of the Bidder.
- 4. The bid shall be accompanied by bid surety in the form of a bid bond or bid deposit.
- 5. If Disadvantaged Business Enterprises (DBE) goals are established for this contract, the bidder shall complete the form Listing of DBE Subcontractors contained elsewhere in this proposal in accordance with the Project Special Provision entitled Disadvantaged Business Enterprises.

In addition to the above requirements, failure to comply with any of the requirements of Articles 102-8, 102-9, 102-10 or 102-11 of the specifications may result in a bid being rejected.

D1G18

DISADVANTAGED BUSINESS ENTERPRISE

 $01-18-00_{R}$

POLICY

It is the policy of the North Carolina Department of Transportation that Disadvantaged Business Enterprises shall have the opportunity to participate in the performance of contracts financed in whole or in part by Federal Funds in order to create a level playing field.

The Contractor is also encouraged to give every opportunity to allow DBE participation in Supplemental Agreements.

OBLIGATION

The contractor, subcontractor, and sub-recipient shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry our applicable requirements of 49 CFR 26 in the award and administration of federally assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the Department deems necessary.

GOALS

Even though specific DBE goals have not been established for this project the Contractor shall report the utilization of DBE's during the construction of the project as follows:

COUNTING DBE PARTICIPATION:

- (1) If a firm is determined to be an eligible DBE firm and certified by the Department, the total dollar value of the participation by the DBE will be counted. The total dollar value of participation by a certified DBE will be based upon the value of work actually performed by the DBE and the actual payments to DBE firms by the contractor.
- When a DBE performs as a participant in a joint venture, the contractor may count a portion of the total value of participation with the DBE in the joint venture, that portion of the total dollar value being a distinct clearly defined portion of work that the DBE performs with its forces.
- (3) (a) The Contractor may count only expenditures to DBEs that perform a commercially useful function in the work of a contract. A DBE is considered to perform a commercially useful function when it is responsible for execution of a distinct element of the work of a contract and carrying out its responsibilities by actually performing, managing, and supervising the work involved. To determine whether a DBE is performing a commercially useful function, the Department will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.

- (b) Consistent with normal industry practices, a DBE may enter into subcontracts. Work that a DBE subcontracts to another DBE firm may be counted. Work that a DBE subcontracts to a non-DBE firm does not count. If a DBE Contractor or Subcontractor subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of normal industry practices, the DBE shall be presumed not to be performing a commercially useful function. The Departments decision on the rebuttal of this presumption is subject to review by the Federal Highway Administration but is not administratively appealable to USDOT.
- (c) The following factors will be used to determine if a DBE trucking, firm is performing a commercially useful function.
 - (1) The DBE firm must be responsible for the management and supervision of entire trucking operation
 - (2) The DBE must itself own and operate at least one fully licensed, insured and operational truck
 - (3) The DBE will receive full credit for all trucks that he owns, insures, operates, and for which he employs drivers
 - (4) The DBE will receive full credit for all trucks leased from a certified DBE firm
 - (5) The DBE will only receive credit for the fees or commission for trucks leased from a non-DBE firm
 - (6) Others may use trucks during the term of the lease so long as the lease gives priority to the DBE for the use of the truck(s).

The DBE may present evidence to rebut this presumption to the Department for commercially useful functions.

- (4) A Contractor may count toward its DBE goal 60 percent of its expenditures for materials and supplies required to complete the contract and obtained from DBE regular dealer and 100 percent of such expenditures to a DBE manufacturer.
 - (a) For purposes of this provision, a manufacturer is a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Contractor.
 - (b) For purposes of this provision, a regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. To be a regular dealer, the firm must engage in, as its principal business and in its own name, the purchase and sale of the products in question. A regular dealer in such bulk items as steel, cement, gravel, stone, and petroleum products need not keep such products in stock, if it owns or operates distribution equipment. Brokers and

packagers shall not be regarded as manufacturers or regular dealers within the meaning of this section.

- (5) A contractor may count toward its DBE goal the following expenditures to DBE firms that are not manufacturers or regular dealers:
 - (a) The fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, toward DBE goal, provided the fees or commissions are determined to be reasonable and not excessive as compared with fees and commissions customarily allowed for similar services.
 - (b) The fees or commissions charged for assistance in the procurement of the materials and supplies, or for transportation charges for the delivery of materials or supplies required on a job site (but not the cost of the materials and supplies themselves), toward DBE goals, provided the fees are not from a manufacturer or regular dealer and provided the fees are determined to be reasonable and not excessive as compared with fees customarily allowed for similar services.

REPORTS

All requests for subcontracts involving DBE subcontractors shall be accompanied by a certification executed by both the Prime Contractor and the DBE subcontractor attesting to the agreed upon unit prices and extensions for the affected contract items. This document shall be on the Department's Form RS-1-D, or in lieu of using the Departments Form, copies of the actual executed agreement between the Prime Contractor and the DBE subcontractor may be submitted. In any event, the Department reserves the right to require copies of actual subcontract agreements involving DBE Subcontractors.

The RS-1-D certification forms may be obtained from the Departments Resident Engineer.

These certifications shall be considered a part of the project records, and consequently will be subject to penalties under Federal Law associated with falsifications of records related to projects.

REPORTING DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION

When payments are made to Disadvantaged Business Enterprise firms, including material suppliers, contractors at all levels (prime, subcontractor, or second tier subcontractor) shall provide the Engineer with an accounting of said payments. This accounting shall be furnished the Engineer for any given month by the end of the following month. Failure to submit this information accordingly may result in (1) withholding of money due in the next partial pay estimate; or (2) removal of an approved Contractor from the prequalified bidders list or the removal of other entities from the approved subcontractors list. The accounting shall list for each payment made to a Disadvantaged Business Enterprise firm the following:

DOT Project Number
Payee Contractor Name
Receiving Contractor or Material Supplier
DBE Certification Basis, e.g., Woman Owned, Native American, African American, etc.
Amount of Payment
Date of Payment

A responsible fiscal officer of the payee contractor, subcontractor, or second tier subcontractor who can attest to the date and amounts of the payments shall certify that the accounting is correct. A copy of an acceptable report may be obtained from the Engineer.

SP1G64

RETAINAGE AND PROMPT PAYMENT:

1-01-02

Retainage:

The Department will not deduct and hold any retainage from the Prime Contractor on this project.

The 2002 Standard Specifications shall be revised as follows:

Sub-Article 109-4(A), pages 1-69 and 1-70

Delete the second, third, fourth, and fifth paragraphs of this subarticle.

Insert the following:

"The Department will withhold an amount sufficient to cover anticipated liquidated damages, as determined by the Engineer."

<u>Prompt Payment of Monies Due Subcontractors, Second Tier Subcontractors and Material Suppliers and Release of Retainage</u>

Contractors at all levels; prime, subcontractor, or second tier contractor, shall within seven calendar days of receipt of monies, resulting from work performed on the project or services rendered, pay subcontractors, second tier subcontractors, or material suppliers, as appropriate. This seven-day period begins upon knowledgeable receipt by the contracting firm obligated to make a subsequent periodic or final payment. These prompt payment requirements will be met if each firm mails the payment to the next level firm by evidence of postmark within the seven-day period.

This provision for prompt payment shall be incorporated into each subcontract or second tier subcontract issued for work performed on the project or for services provided.

The Contractor may withhold up to 3% retainage if any subcontractor does not obtain a payment and performance bond for their portion of the work. If any retainage is held on subcontractors, all retainage shall be released within seven calendar days of satisfactory completion of all work. For the purpose of release of retainage, satisfactory completion is defined as completion of all

physical elements and corresponding documentation as defined in the contract, as well as agreement between the parties as to the final quantities for all work performed in the subcontract. The Department will provide internal controls to expedite the determination and processing of the final quantities for the satisfactorily completed subcontract portions of the project.

Failure of any entity to make prompt payment as defined herein may result in (1) withholding of money due to that entity in the next partial payment until such assurances are made satisfactory to this provision; or (2) removal of an approved contractor from the prequalified bidders list or the removal of other entities from the approved subcontractors list.

SP1G73

CERTIFICATION FOR FEDERAL-AID CONTRACTS:

03-21-90

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

SP1G85

DOMESTIC STEEL AND IRON PRODUCTS:

7-1-95

All steel and iron products which are permanently incorporated into this project shall be produced in the United States except minimal amounts of foreign steel and iron products may be

used provided the combined project cost of the bid items involved does not exceed one-tenth of one percent (0.1 percent) of the total amount bid for the entire project or \$2,500.00, whichever is greater. This minimal amount of foreign produced steel and iron products permitted for use by this Special Provision is not applicable to fasteners. Domestically produced fasteners are required for this project.

All steel and iron products furnished as "domestic products" shall be melted, cast, formed, shaped, drawn, extruded, forged, fabricated, produced, or otherwise processed and manufactured in the United States. Raw materials including pig iron and processed pelletized and reduced iron ore used in manufacturing "domestic" steel products may be imported; however, all manufacturing processes to produce the products, including coatings, must occur in the United States.

Before each steel or iron product is incorporated into this project or included for partial payment on a monthly estimate, the Contractor shall furnish the Resident Engineer a notarized certification certifying that the product conforms to the above requirements of this Special Provision. The Resident Engineer will forward a copy of each certification to the Materials and Tests Unit.

Each purchase order issued by the Contractor or a subcontractor for steel and iron products to be permanently incorporated into this project shall contain in bold print a statement advising the supplier that all manufacturing processes to produce the steel or iron shall have occurred in the United States. The Contractor and all affected subcontractors shall maintain a separate file for steel products permanently incorporated into this project so that verification of the Contractor's efforts to purchase "domestic" steel and iron products can readily be verified by an authorized representative of the Department or the Federal Highway Administration.

SP1G97

U.S. DEPARTMENT OF TRANSPORTATION HOTLINE:

11-22-94

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SP1G100

SUBMISSION OF RECORDS - FEDERAL-AID PROJECTS:

12-15-98

The Contractor's attention is directed to the Standard Special Provisions entitled "Required Contract Provisions - Federal-Aid Construction Contracts" contained elsewhere in this proposal.

This project is located on the National Highway System. If the final construction cost of this project equals or exceeds **One Million Dollars**, the Contractor must submit federal form FHWA-47.

SP1G106

COMPENSATION AND RECORD KEEPING

03-16-04

Revise the 2002 Standard Specifications as follows:

104-8 Compensation and Record Keeping

Change Article (A), subarticle 1. with the following:

In line 3 and line 6, change \$15,000.00 to \$25,000.00.

SP1G110

CONTRACTOR BORROW SOURCE

10-19-04

Revise the 2002 Standard Specifications as follows:

Page 2-17, Article 230-4(C) Contractor Furnished Sources, add the following;

If the Contractor proposes a borrow source, the environmental assessment shall include wetland and stream delineation extending 400 feet beyond the proposed borrow source limits.

- 1. If wetlands or streams are present within 400 feet of the borrow source and the contractor proposes to dewater:
 - a. Submit a hydrologic analysis (Skaggs Method) to determine if lateral effects will permanently impact or cause degradation to wetlands or streams. The analysis shall be performed by an environmental or hydraulics engineer with expertise in this discipline and shall consist of, but not be limited to:

Hydric soil type Average profile depth to restrictive soil layer Average hydraulic conductivity or permeability Average drainable porosity or available water capacity Required buffer width, including safety factor

- b. Attach a conservation easement specifying that the completed pit impoundment, shall not be drained, ditched, used for irrigation, or any other manner that would degrade wetlands and streams.
- c. Provide copy of recorded conservation easement to Engineer prior to commencement of any work on proposed pit.
- 2. If wetlands or streams are not present within 400 feet, no additional documentation will be required.

During Department review of the proposed borrow area, the hydrologic analysis will be submitted to the U. S. Army Corps of Engineers for evaluation.

Obtain copy of Skaggs Method for Determining Lateral Effects of a Borrow Pit on Adjacent Wetlands from Roadside Environmental Unit web site:

http://www.doh.dot.state.nc.us/operations/dp_chief_eng/roadside/fieldops/

Copies may also be obtained from Room 558, Transportation Building, 1 S. Wilmington Street, Raleigh, NC 27601.

SP1G111

SUBSURFACE INFORMATION:

7-1-95

Subsurface information is available on the roadway portion of this project only.

SP1G115

PLANT AND PEST QUARANTINES:

03-18-03

(IMPORTED FIRE ANT, GYPSY MOTH, WITCHWEED, AND OTHER NOXIOUS WEEDS)

Within quarantined area:

This project may be within a county regulated for plant and/or pests. If the project or any part of the Contractor's operations is located within a quarantined area, thoroughly clean all equipment prior to moving out of the quarantined area. Comply with federal/state regulations by obtaining a certificate or limited permit for any regulated article moving from the quarantined area.

Originating in a quarantined county:

Obtain a certificate or limited permit issued by the N.C. Department of Agriculture/United States Department of Agriculture. Have the certificate or limited permit accompany the article when it arrives at the project site.

Contact:

Contact the N.C. Department of Agriculture/United States Department of Agriculture at 1-800-206-9333, 919-733-6932, or http://www.ncagr.com/plantind/ to determine those specific project sites located in the quarantined area or for any regulated article used on this project originating in a quarantined county.

Regulated Articles Include:

- 1. Soil, sand, gravel, compost, peat, humus, muck, and decomposed manure, separately or with other articles. This includes movement of articles listed above that may be associated with cut/waste, ditch pulling, and shoulder cutting.
- 2. Plants with roots including grass sod.
- 3. Plant crowns and roots.
- 4. Bulbs, corms, rhizomes, and tubers of ornamental plants.
- 5. Hay, straw, fodder, and plant litter of any kind.
- 6. Clearing and grubbing debris.
- 7. Used agricultural cultivating and harvesting equipment.
- 8. Used earth-moving equipment.
- 9. Any other products, articles, or means of conveyance, of any character, if determined by an inspector to present a hazard of spreading imported fire ant, gypsy moth, witchweed or other noxious weeds.

SP1G130

SAFETY VESTS:

6-19-01

All Contractors' personnel, all subcontractors and their personnel, and any material suppliers and their personnel must wear an OSHA approved reflective vest or outer garment at all times while on the project.

SP1G139

DIRECTOR OF CONSTRUCTION IN LIEU OF CHIEF ENGINEER

03-16-04

Revise the 2002 Standard Specifications as follows:

Wherever the term *Chief Engineer* or *Chief Engineer of Operations* occurs in the Specifications, the actions and responsibilities referred to will be performed by the Director of Construction, Division of Highways, North Carolina Department of Transportation, acting directly or through his duly authorized representative.

Revision to Definitions of Terms

Page 1-4, Article 101-35

101-35 ENGINEER

The Chief Engineer of Operations, and/or Director of Construction, Division of Highways, North Carolina, Department of Transportation, acting directly or through their duly authorized representative.

SP1G143

TWELVE MONTH GUARANTEE:

07-15-03

- A. The Contractor shall guarantee materials and workmanship against latent and patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve months following the date of final acceptance of the work for maintenance and shall replace such defective materials and workmanship without cost to the Department. The Contractor will not be responsible for damage due to faulty design, normal wear and tear, for negligence on the part of the Department, and/or for use in excess of the design.
- B. Where items of equipment or material carry a manufacturer's guarantee for any period in excess of twelve months, then the manufacturer's guarantee shall apply for that particular piece of equipment or material. The Department's first remedy shall be through the manufacturer although the Contractor is responsible for invoking the warranted repair work with the manufacturer. The Contractor's responsibility shall be limited to the term of the manufacturer's guarantee. NCDOT would be afforded the same warranty as provided by the Manufacturer.

This guarantee provision shall be invoked only for major components of work in which the Contractor would be wholly responsible for under the terms of the contract. Examples would include pavement structures, bridge components, and sign structures. This provision shall not be used as a mechanism to force the Contractor to return to the project to make repairs or perform additional work that the Department would normally compensate the Contractor for. In addition, routine maintenance activities (i.e. mowing grass, debris removal, ruts in earth shoulders,) are not parts of this guarantee.

Appropriate provisions of the payment and/or performance bonds shall cover this guarantee for the project.

To ensure uniform application statewide the Division Engineer will forward details regarding the circumstances surrounding any proposed guarantee repairs to the Chief Engineer for review and approval prior to the work being performed.

SP1G145

OUTSOURCING OUTSIDE THE USA

09-21-04

All work on consultant contracts, services contracts, and construction contracts shall be performed in the United States of America. No work shall be outsourced outside of the United States of America.

Outsourcing for the purpose of this provision is defined as the practice of subcontracting labor, work, services, staffing, or personnel to entities located outside of the United States.

The Secretary of Transportation shall approve exceptions to this provision in writing. SP1G150

DISQUALIFICATION OF BIDDERS

11-16-04

The 2002 Standard Specifications are revised as follows:

Page 1-17 Article 102-16, replace No.12 with the following:

12. Failure to submit the documents required by Article 109-10 within 60 days after request by the Engineer.

Page 1-18 Article 102-16, add the following after Number 15.

16. False information submitted on any application, statement, certification, report, records and/or reproduction.

Conviction of any employee of company, of any applicable state or federal law, may be fully imputed to the business firm with which he is or was associated or by whom he was employed or with the knowledge or approval of the business firm or thereafter ratified by it.

- 17. Being debarred from performing work with other city, state, and federal agencies.
- 18. Failure to perform guaranty work within the terms of the contract.

SP1G155

PROJECT SPECIAL PROVISIONS

Roadway

07-20-04

LS1R01

UNREINFORCED CONCRETE

10-14-04

Description

Furnish and place 9" Unreinforced Concrete behind the proposed single faced concrete barrier as shown in the plans and as directed.

Materials

Concrete shall be in accordance with the applicable requirements of Section 825 except that no reinforcement will be required.

Method of Measurement

The quantity of "Unreinforced Concrete" to be paid for will be the actual number of square yards of concrete measured along the surface of the completed and accepted work.

Basis of Payment

The quantity of "Unreinforced Concrete" measured as provided above will be paid for at the contract unit price per square yard for "Unreinforced Concrete".

Payment will be made under:

Pay ItemPay UnitUnreinforced ConcreteSquare Yard

BORROW EXCAVATION:

2-19-02

Revise the 2002 Standard Specifications as follows:

Page 2-20, Article 230-6

After the first paragraph, insert the following paragraph:

"No direct payment will be made for the work of Evaluation of Potential Wetlands and Endangered Species as outlined above. Payment at the contract unit price for the pay item 'Borrow Excavation' or 'Grading - Lump Sum' will be considered full compensation for this work.'

SP2R37

SHOULDER AND FILL SLOPE MATERIAL:

5-21-02

General:

Perform the required shoulder and slope construction for this project in accordance with the applicable requirements of Section 560 and Section 235 of the Standard Specifications except as follows:

Construct the top 6 inches (150-mm) of shoulder and fill slopes with soils capable of supporting vegetation.

Provide soil with a P.I. greater than 6 and less than 25 and with a pH ranging from 5.5 to 6.8. Remove stones and other foreign material 2 inches (50 mm) or larger in diameter. All soil is subject to test and acceptance or rejection by the Engineer.

Obtain material from within the project limits or approved borrow source.

Compensation:

When the Contractor elects to obtain material from an area located beneath a proposed fill sections which does not require excavation for any reason other than to generate acceptable shoulder and fill slope material, the work of performing the excavation will be considered incidental to the item of "Borrow Excavation" or "Shoulder Borrow". If there is no pay item for "Borrow" or "Shoulder Excavation" in the contract, this work will be considered incidental to "Unclassified Excavation". Stockpile the excavated material in a manner to facilitate measurement by the Engineer. Fill the void created by the excavation of the shoulder and fill slope material with suitable material. Payment for material used from the stockpile will be made at the contract unit price for "Borrow Excavation" or "Shoulder Borrow". If there is no pay item for "Borrow Excavation" or "Shoulder Borrow", then the material will be paid for at the contract unit price for "Unclassified Excavation". The material used to fill the void created by the excavation of the shoulder and fill slope material will be made at the contract unit price for "Unclassified Excavation", "Borrow Excavation", or "Shoulder Borrow", depending on the source of the material.

Material generated from undercut excavation, unclassified excavation or clearing and grubbing operations that is placed directly on shoulders or slope areas, will not be measured separately for payment, as payment for the work requiring the excavation will be considered adequate compensation for depositing and grading the material on the shoulders or slopes.

When undercut excavation is performed at the direction of the Engineer and the material excavated is found to be suitable for use as shoulder and fill slope material, and there is no area on the project currently prepared to receive the material generated by the undercut operation, the Contractor may construct a stockpile for use as borrow at a later date. Payment for the material used from the stockpile will be made at the contract unit price for "Borrow Excavation" or "Shoulder Borrow".

When shoulder material is obtained from borrow sources or from stockpiled material, payment for the work of shoulder construction will be made at the contract unit price per cubic

yard (cubic meter) for "Borrow Excavation" or "Shoulder Borrow" in accordance with the applicable provisions of Section 230 or Section 560 of the Standard Specifications.

SP2R50

ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I 19.0D MODIFIED:

For the Asphalt Concrete Intermediate Course, Type 119.0D MODIFIED as specified in the typical sections, utilize a mix design which meets the requirements of TABLE 6 10-1 and Table 610-2 of the Standard Specifications, except that the percent passing the 2.36 mm sieve shall be a minimum of 40% and the aggregate blend gradation will remain above the maximum density line on larger sieves.

ASPHALT PAVEMENTS - SUPERPAVE

02-17-04

Revise the 2002 Standard Specifications as follows:

PRIME COAT

Page 6-2, Article 600-9

Delete the first paragraph under this Article and substitute the following:

The quantity of prime coat to be paid will be the number of gallons (liters) of prime coat material that has been satisfactorily placed on the roadway. Each distributor load of prime coat material delivered and utilized on the project will be measured.

ASPHALT TACK COAT

Page 6-4, Article 605-8

Insert the following after paragraph one in this Article:

Take necessary precautions to limit the tracking and/or accumulation of tack coat material on either existing or newly constructed pavements. Excessive accumulation of tack may require corrective measures.

FIELD VERIFICATION AND JOB MIX FORMULA ADJUSTMENTS

Page 6-7, Article 609-4

Delete the first paragraph under this Article and substitute the following:

Conduct field verification of the mix at each plant within 30 calendar days prior to initial production of each mix design, when required by the Allowable Mix Adjustment Policy and when directed as deemed necessary.

Page 6-8, Article 609-4

Delete the first paragraph on this page and substitute the following:

Retain records of these calibrations and mix verification tests, including Superpave Gyratory Compactor (SGC) printouts, at the QC laboratory. In addition, furnish copies, including SGC printouts, to the Engineer for review and approval within one working day after beginning production of the mix.

Page 6-8, Article 609-4

Add the following sentence to the end of the last paragraph in this Article:

Any mix produced that is not verified may be assessed a price reduction at the Engineer's discretion in addition to any reduction in pay due to mix and/or density deficiencies.

Quality control minimum sampling and testing schedule:

Page 6-9, Subarticle 609-5(C)1

Delete the second sentence in the second paragraph of this Article and substitute the following:

Retain the QC compacted volumetric test specimens for 5 calendar days, commencing the day the specimens are prepared.

Page 6-9, Subarticle 609-5(C)2

At the bottom of this page, delete the sentence directly above the <u>Accumulative Production</u> Increment and substitute the following:

Sample and test the completed mixture from each mix design at the following minimum frequency during mix production:

Page 6-10, Subarticle 609-5(C)2

Revise Items B, C, D and E on this page as follows:

- B. Gradation on Recovered Blended Aggregate from Mix Sample (AASHTO T 30 Modified) Grade on all sieves specified on JMF
- C. Maximum Specific Gravity (AASHTO T 209 or ASTM D 2041), optional (ASTM D 6857)
- D. Bulk Specific Gravity of Compacted Specimens (AASHTO T166), optional (ASTM D 6752), Average of 3 specimens at N_{des} gyrations (AASHTO T 312)
- E. Air Voids (VTM) (AASHTO T 269), Average of 3 specimens at N_{des} gyrations

Page 6-11, Subarticle 609-5(C)2

At the top of this page, delete Item B.," Reclaimed Asphalt Pavement..." and substitute the following:

B. Reclaimed Asphalt Pavement (RAP) Binder Content and Gradation (AASHTO T 308 Modified or T 164 and AASHTO T 30 Modified) (sampled from stockpiles or cold feed system at beginning of production and weekly thereafter). Have RAP approved for use in accordance with Article 1012-1(G). (Split Sample Required)

Page 6-11, Subarticle 609-5(C)2

Insert the following sampling and testing at the end of this Subarticle

- F. Uncompacted Void Content of Fine Aggregate, AASHTO T 304, Method A (natural sand only). Performed at Mix Design and when directed as deemed necessary. (Split Sample Required)
- G. Reclaimed Asphalt Shingle Material (RAS) Binder Content and Gradation (AASHTO T 308 Modified or T 164 and AASHTO T 30 Modified) (sampled from stockpiles or cold feed system at beginning of production and weekly thereafter). Have RAS approved for use in accordance with Article 1012-1(F). (Split Sample Required)

CONTROL CHARTS

Page 6-11, Subarticle 609-5(C)3

Delete the second sentence of the first paragraph in this Subarticle and substitute the following:

Record all regularly scheduled random sample or directed sample full test series results for mix incorporated into the project on control charts the same day the test results are obtained.

Page 6-12, Subarticle 609-5(C)3

Delete item 3 in the list below the second full paragraph on this page.

CONTROL LIMITS

Page 6-12, Subarticle 609-5(C) 4

At the bottom of this page, delete the table and substitute the following:

CONTROL LIMITS

Mix Control	Target Source	Warning	Moving Average	Individual
Criteria		Limit	Limit	Limit
2.36mm Sieve	JMF	±4.0 %	±5.0 %	±8.0 %
0.075mm Sieve	JMF	±1.5 %	±2.0 %	±2.5 %
Binder Content	JMF	±0.3 %	±0.5 %	±0.7 %
VTM @ N _{des}	JMF	±1.0 %	±1.5 %	±2.0 %
VMA @ N _{des}	Min. Spec. Limit	-0.5%	-0.8%	-1.0%
P _{0.075} / P _{be} Ratio	Max. Spec. Limit	0.0	N/A	+0.4%
%G _{mm} @ N _{ini}	Max. Spec. Limit	N/A	N/A	+2.0%
TSR	Min. Spec. Limit	N/A	N/A	-15.0%

FIELD COMPACTION QUALITY CONTROL

Page 6-15, Subarticle 609-5(D)1

Delete the first and second sentences in the fourth paragraph on this page and substitute the following:

Base and intermediate mix types (surface mixes not included) utilized for pavement widening of less than 4.0 feet and all mix types used in tapers, irregular areas and intersections (excluding full width travel lanes of uniform thickness), will not be subject to the sampling and testing frequency specified above provided the pavement is compacted using approved equipment and procedures. However, the Engineer may require occasional density sampling and testing to evaluate the compaction process.

Page 6-16, Subarticle 609-5(D)1

Delete item number 2 at the top of this page. Item number 3 should be re-numbered as 2 after the specified deletion.

LIMITED PRODUCTION PROCEDURE

Page 6-17, Subarticle 609-5(D) 5

Delete the first paragraph in this Subarticle and substitute the following:

Proceed on limited production when, for the same mix type, one of the following items occur:

- (1) Two consecutive failing lots, excluding lots representing an individual resurfacing map or portion thereof.
- (2) Three consecutive failing lots, with each lot representing an individual resurfacing map or portion thereof.
- (3) Two consecutive failing nuclear control strips.

Pavement within each construction category (New and Other), as defined in Article 610-13, and pavement placed simultaneously by multiple paving crews will be evaluated independently for limited production purposes.

Delete the first sentence in the last paragraph in this Subarticle and substitute the following:

If the Contractor does not operate by the limited production procedures as specified above, the two consecutive failing density lots, three consecutive failing lots with each lot representing an individual resurfacing map or portion thereof, or two consecutive failing nuclear control strips, whichever is applicable, and all mix produced thereafter will be considered unacceptable.

DOCUMENTATION (RECORDS)

Page 6-18, Subarticle 609-5(E)

Delete the third and fourth sentence in the first full paragraph on this page and substitute the following:

Maintain all QC records, forms and equipment calibrations for a minimum of 3 years from their completion date.

Delete the second full paragraph on this page and substitute the following:

Falsification of test results, documentation of observations, records of inspection, adjustments to the process, discarding of samples and/or test results, or any other deliberate misrepresentation of the facts will result in the revocation of the applicable person's QMS certification. The Engineer will determine acceptability of the mix and/or pavement represented by the falsified results or documentation. If the mix and/or pavement in question is determined to be acceptable, the Engineer may allow the mix to remain in place at no pay for the mix, asphalt binder and other mix components. If the mix and/or pavement represented by the falsified results is determined not to be acceptable, remove and replace with mix, which complies with the Specifications. Payment will be made for the actual quantities of materials required to replace the falsified quantities, not to exceed the original amounts.

QUALITY ASSURANCE

Page 6-18, Article 609-6

In Item 5 under <u>Plant Mix Quality Assurance</u>, add "at a frequency equal to or greater than 5% of the QC sample frequency".

In the first sentence within the paragraph below <u>Plant Mix Quality Assurance</u>, delete the words "of mix".

In Item 1 under <u>Density Quality Assurance</u>, delete the wording at the end of the sentence "at a frequency equal to or greater than 10% of the frequency required of the Contractor".

Page 6-19, Article 609-6

In Item 4 under <u>Density Quality Assurance</u>, add "at a frequency equal to or greater than 5% of the OC sample frequency."

Insert the following after Item 4 under <u>Density Quality Assurance</u>:

6. By periodically directing the recalculation of random numbers for the Quality Control core or nuclear density test locations. The original QC test locations may be tested by QA and evaluated as verification tests.

LIMITS OF PRECISION

Page 6-19, Article 609-6

In the limits of precision table, delete the last three rows and substitute the following:

QA retest of prepared QC Gyratory Compacted

Volumetric Specimens ± 0.015 Retest of QC Core Sample $\pm 1.2\%$ (% Compaction)Comparison of QA Core Sample $\pm 2.0\%$ (% Compaction)QA Verification Core Sample $\pm 2.0\%$ (% Compaction)Nuclear Comparison of QC Test $\pm 2.0\%$ (% Compaction)QA Nuclear Verification Test $\pm 2.0\%$ (% Compaction)

ASPHALT CONCRETE PLANT MIX PAVEMENTS – DESCRIPTION

Page 6-20, Article 610-1

Insert the following after the last paragraph in this Article:

A high frequency of asphalt plant mix, density, or mix and density deficiencies occurring over an extended duration of time may result in future asphalt, which is represented by mix and/or density test results not in compliance with minimum specification requirements, being excluded from acceptance at an adjusted contract unit price in accordance with Article 105-3. This acceptance process may apply to all asphalt produced and /or placed and may continue until the Engineer determines a history of quality asphalt production and placement is reestablished.

Contract C201320

MATERIALS

Page 6-21, Article 610-2

Delete reference of Anti-strip additive (chemical) to Article 1020-2 and substitute Article 1020-8.

COMPOSITION OF MIXTURES (MIX DESIGN AND JOB MIX FORMULA)

Page 6-21, Subarticle 610-3(A)

At the end of the second paragraph under this Subarticle, add the following sentence:

In addition, submit Superpave gyratory compactor printouts for all specimens compacted at N_{des} and N_{max} during the mix design process.

Insert the following paragraph after the second paragraph under this Subarticle:

For the final surface layer of the specified mix type, use a mix design with an aggregate blend gradation above the maximum density line on the 2.36 mm and larger sieves.

Insert the following at the end of the third paragraph under this Article:

When the percent of binder contributed from RAS or a combination of RAS and RAP exceeds 20 percent of the total binder in the completed mix, the virgin binder PG grade must be one grade below (both high and low temperature grade) the binder grade specified in Table 610-2 for the mix type.

Delete the fourth paragraph in this Subarticle and substitute the following:

For Type S 12.5D mixes, the maximum percentage of reclaimed asphalt material is limited to 15% and must be produced using virgin asphalt binder grade PG 76-22. For all other recycled mix types, when the percentage of RAP is 15 percent or less of the total mixture, the virgin binder PG grade must be as specified in Table 610-2 for the specified mix type. When the percentage of RAP is greater than 15 but not more than 25 percent of the total mixture, the virgin binder PG grade must be one grade below (both high and low temperature grade) the specified grade for the mix type. When the percentage of RAP is greater than 25 percent of the total mixture, the Engineer will establish and approve the asphalt binder grade.

Page 6-22, Subarticle 610-3(A)

Insert the following sentence at the end of the Item 4:

If natural sand is utilized in the proposed mix design, determine and report the Uncompacted Void Content of the natural sand in accordance with AASHTO T-304, Method A.

Page 6-23, Subarticle 610-3(A)

Under the quantities of mix components insert the following sentence:

When requested by the Engineer, submit to the Department's Materials and Tests Unit, in Raleigh, six (6) Superpave Gyratory Compactor specimens compacted to a height of 75 mm and to a void content (VTM) of 4.0% +/- 0.5% for performance rut testing with the Asphalt Pavement Analyzer.

JOB MIX FORMULA

Page 6-24, Subarticle 610-3(C)

Delete Table 610-1 and associated notes. Substitute the following:

TABLE 610-1 SUPERPAVE AGGREGATE GRADATION DESIGN CRITERIA

Standard		Percent Passing Criteria (Control Points)										
Sieves		Mix Type (Nominal Maximum Aggregate Size)										
	4.75 n	nm (a)	9.5 m	m (c)	12.5 n	nm (c)	19.0	mm	25.0	mm	37.5	mm
(mm)	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
50.0												100.0
37.5										100.0	90.0	100.0
25.0								100.0	90.0	100.0		90.0
19.0						100.0	90.0	100.0		90.0		
12.5				100.0	90.0	100.0		90.0	***************************************		***************************************	
9.5		100.0	90.0	100.0		90.0						
4.75	90.0	100.0		90.0								
2.36	65.0	90.0	32.0 (b)	67.0 (b)	28.0	58.0	23.0	49.0	19.0	45.0	15.0	41.0
1.18												
0.600												
0.300												
0.150												
0.075	4.0	8.0	4.0	8.0	4.0	8.0	3.0	8.0	3.0	7.0	3.0	6.0

- (a) For Type S 4.75A, a minimum of 50% of the aggregate components shall be manufactured material from the crushing of stone.
- (b) For Type SF 9.5A, the percent passing the 2.36mm sieve shall be a minimum of 60% and a maximum of 70%.
- (c) For the final surface layer of the specified mix type, use a mix design with an aggregate blend gradation above the maximum density line on the 2.36 mm and larger sieves.

Page 6-25, Subarticle 610-3(C),

Delete Table 610-2 and associated notes. Substitute the following:

TABLE 610-2 SUPERPAVE MIX DESIGN CRITERIA

	Design	Binder	Comp	action I	Levels	V	olumetric	Properties	(c)
Mix	ESALs	PG							
Type	millions	Grade	No. 0	Gyratior	is @	VMA	VTM	VFA	%Gmm
(f)	(a)	(b)	N _{ini}	N_{des}	N _{max}	% Min.	%	Min Max.	@ N _{ini}
S-4.75A	< 0.3	64 -22	6	50	75	20.0	7.0-15.0		
SF-9.5A	<0.3	64 -22	6	50	75	16.0	3.0 - 5.0	70 - 80	≤ 91.5
S-9.5B	0.3 - 3	64 -22	7	75	115	15.0	3.0 - 5.0	65 - 80	≤ 90.5
S-9.5C	3 - 30	70 -22	8	100	160	15.0	3.0 - 5.0	65 - 76	≤ 90.0
S-12.5C	3 - 30	70 -22	8	100	160	14.0	3.0 - 5.0	65 - 75	≤ 90.0
S-12.5D	> 30	76 -22	9	125	205	14.0	3.0 - 5.0	65 - 75	≤ 90.0
I-19.0B	< 3	64 -22	7	75	115	13.0	3.0 - 5.0	65 - 78	≤90.5
I-19.0C	3 - 30	64 -22	8	100	160	13.0	3.0 - 5.0	65 - 75	≤ 90.0
I-19.0D	> 30	70 -22	9	125	205	13.0	3.0 - 5.0	65 - 75	≤ 90.0
B-25.0B	< 3	64 -22	7	75	115	12.0	3.0 - 5.0	65 - 78	≤ 90.5
B-25.0C	> 3	64 -22	8	100	160	12.0	3.0 - 5.0	65 - 75	≤ 90.0
B-37.5C	> 3	64 -22	8	100	160	11.0	3.0 - 5.0	63 - 75	≤ 90.0
	Design Parameter						Design	Criteria	
All	1. %G _{mm} @ N _{max}						≤ 98.0)% (d)	
Mix	2. Dust to Binder Ratio (P _{0.075} / P _{be})						0.6	- 1.4	
Types	3. Retained Tensile Strength (TSR) (AASHTO T 283 Modified)						85 %]	Min. (e)	

Notes:

- (a) Based on 20 year design traffic.
- (b) When Recycled Mixes are used, select the binder grade to be added in accordance with Subarticle 610-3(A).
- (c) Volumetric Properties based on specimens compacted to N_{des} as modified by the Department.
- (d) Based on specimens compacted to N_{max} at selected optimum asphalt content.
- (e) AASHTO T 283 Modified (No Freeze-Thaw cycle required). TSR for Type S 4.75A, Type B 25.0 and Type B 37.5 mixes is 80% minimum.
- (f) Mix Design Criteria for Type S 4.75A may be modified subject to the approval of the Engineer

WEATHER, TEMPERATURE, AND SEASONAL LIMITATIONS FOR PRODUCING AND PLACING ASPHALT MIXTURES

Page 6-26, Article 610-4, Table 610-3

Delete the title of Table 610-3 and substitute the following title:

ASPHALT PLACEMENT- MINIMUM TEMPERATURE REQUIREMENTS

In the first column, third row; delete reference to the ACSC Types S 9.5A and S 12.5B mix.

Add the following minimum placing temperatures for mix types S 4.75A and SF 9.5A.

Asphalt Concrete Mix Type	Minimum Air Temperature	Minimum Road Surface Temperature
ACSC, Type S 4.75A, SF 9.5A	40°F (5°C)	50°F (10°C)

SPREADING AND FINISHING

Page 6-32, Article 610-8

Insert the following after the second sentence within the sixth paragraph in this Article,

Take necessary precautions during production, loading of trucks, transportation, truck exchanges with paver, folding of the paver hopper wings, and conveying material in front of the screed to prevent segregation of the asphalt mixtures.

Page 6-33, Article 610-8

At the end of the third full paragraph on this page, add the following sentence:

Waiver of the use of automatic screed controls does not relieve the Contractor of achieving plan grades and cross-slopes.

DENSITY REQUIREMENTS

Page 6-34, Article 610-10,

Delete Table 610-4 and substitute the following table and associated notes:

Table 610-4 MINIMUM DENSITY REQUIREMENTS

MIX TYPE	MINIMUM % of G _{mm}		
SUPERPAVE MIXES	(Maximum Specific Gravity)		
S 4.75A	85.0 ^(a,b)		
SF 9.5A	90.0		
S 9.5X, S 12.5X, I 19.0X,	92.0		
B 25.0X, B 37.5X			

- (a) All S 4.75A pavement will be accepted for density in accordance with Article 105-3
- (b) Compaction to the above specified density will be required when the S 4.75 A mix is applied at a rate of 100 lbs/sy (55 kg/m²)

Page 6-34, Article 610-10

Contract C201320

Delete the second paragraph in this Article and substitute the following:

Compact base and intermediate mix types (surface mixes not included) utilized for pavement widening of less than 4.0 feet (1.2 meters) and all mix types used in tapers, irregular areas and intersections (excluding full width travel lanes of uniform thickness), using equipment and procedures appropriate for the pavement area width and/or shape. Compaction with equipment other than conventional steel drum rollers may be necessary to achieve adequate compaction. Occasional density sampling and testing to evaluate the compaction process may be required. Densities lower than that specified in Table 610-4 will be accepted, in accordance with Article 105-3, for the specific mix types and areas listed directly above.

SURFACE REQUIREMENTS AND ACCEPTANCE

Page 6-35, Article 610-12

Delete the first paragraph in this Article and substitute the following:

Construct pavements using quality paving practices as detailed herein. Construct the pavement surface smooth and true to the plan grade and cross slope. Immediately correct any defective areas with satisfactory material compacted to conform with the surrounding area. Pavement imperfections resulting from unsatisfactory workmanship such as segregation, improper longitudinal joint placement or alignment, non-uniform edge alignment and excessive pavement repairs will be considered unsatisfactory and if allowed to remain in place will be accepted in accordance with Article 105-3.

When directed due to unsatisfactory laydown or workmanship, operate under the limited production procedures. Limited production for unsatisfactory laydown is defined as being restricted to the production, placement, compaction, and final surface testing (if applicable) of a sufficient quantity of mix necessary to construct only 2500 feet (750 meter) of pavement at the laydown width.

Remain on limited production until such time as satisfactory laydown results are obtained or until three consecutive 2500 foot (750 meter) sections have been attempted without achieving satisfactory laydown results. If the Contractor fails to achieve satisfactory laydown results after three consecutive 2500 foot (750 meter) sections have been attempted, cease production of that mix type until such time as the cause of the unsatisfactory laydown results can be determined. As an exception, the Engineer may grant approval to produce a different mix design of the same mix type if the cause is related to mix problem(s) rather than laydown procedures.

Mix placed under the limited production procedures for unsatisfactory laydown or workmanship will be evaluated for acceptance in accordance with Article 105-3.

DENSITY ACCEPTANCE

Page 6-36, Article 610-13

Delete the second paragraph on this page and substitute the following:

The pavement will be accepted for density on a lot by lot basis. A lot will consist of one day's production of a given job mix formula on a contract. As an exception, separate lots will be established when the one of the following occurs:

- (6) Portions of pavement are placed in both "New" and "Other" construction categories as defined below. A lot will be established for the portion of the pavement in the "New" construction category and a separate lot for the portion of pavement in the "Other" construction category.
- (7) Pavement is placed on multiple resurfacing maps, unless otherwise approved prior to paving. A lot will be established for each individual resurfacing map or portion thereof.
- (8) Pavement is placed simultaneously by multiple paving crews. A lot will be established for the pavement placed by each paving crew.
- (9) Pavement is placed in different layers. A lot will be established for each layer.
- (10) Control strips are placed during limited production.

The Engineer will determine the final category and quantity of each lot for acceptance purposes.

Page 6-36, Article 610-13

Delete the first sentence in the third paragraph on this page and insert the following:

The "New" construction category will be defined as pavements of uniform thickness, exclusive of irregular areas, meeting all three of the following criteria:

Delete the sixth paragraph in this Article and substitute the following:

A failing lot for density acceptance purposes is defined as a lot for which the average of all test sections, and portions thereof, fails to meet the minimum specification requirement. If additional density sampling and testing, beyond the minimum requirement, is performed and additional test sections are thereby created, then all test results shall be included in the lot average. In addition, any lot or portion of a lot that is obviously unacceptable will be rejected for use in the work.

Page 6-36, Article 610-13

Delete the last paragraph on this page and substitute the following:

Any density lot not meeting minimum density requirements detailed in Table 610-4 will be evaluated for acceptance by the Engineer. If the lot is determined to be reasonably acceptable, the mix will be paid at an adjusted contract price in accordance with Article 105-3. If the lot is

determined not to be acceptable, the mix will be removed and replaced with mix meeting and compacted to the requirement of these specifications.

BASIS OF PAYMENT, ASPHALT PAVEMENTS

Page 6-37, Article 610-16

Add the following to the second paragraph:

The quantity of hot mix asphalt pavement, measured as provided in Article 610-15, will be paid for at the contract unit prices per ton (metric ton) for "Asphalt Concrete Surface Course, Type S 4.75A, and SF 9.5A".

Add the following to the payment item description:

Asphalt Concrete Surface Course,	Type S 4.75A	Ton (Metric Ton)
Asphalt Concrete Surface Course,	Type SF 9.5A	Ton (Metric Ton)

Delete reference to the Asphalt Concrete Surface Course, Types S 9.5A and S 12.5B in both the second paragraph and in the payment description.

ASPHALT BINDER FOR PLANT MIX - METHOD OF MEASUREMENT

Page 6-39, Article 620-4

Delete the first sentence of the second paragraph on this page and substitute the following:

Where recycled plant mix is being produced, the grade of asphalt binder to be paid for will be the grade for the specified mix type as required in Table 610-2 unless otherwise approved.

CONSTRUCTION REQUIREMENTS

Page 6-43, Article 650-5

Add the following paragraph after the first paragraph under this Article:

Do not place open-graded asphalt friction course between October 31 and April 1 of the next year, unless otherwise approved. Place friction course, Type FC-1 mixes, only when the road surface temperature is 50°F (10°C) or higher and the air temperature is 50°F (10°C) or higher. The minimum air temperature for Type FC-1 Modified and FC-2 Modified mixes will be 60°F (15°C).

AGGREGATES FOR ASPHALT PLANT MIXES

Page 10-34, Subarticle 1012-1(B)4

Delete this Subarticle and substitute the following:

(4) Flat and Elongated Pieces:

Use coarse aggregate meeting the requirements of Table 1012-1 for flat and elongated pieces when tested in accordance with ASTM D 4791 (Section 8.4) on the No. 4 (4.75 mm) sieve and larger with a 5:1 aspect ratio (maximum to minimum) for all pavement types, except there is no requirement for Types S 4.75A, SF 9.5A, and S 9.5B.

Page 10-35, Table 1012-1

Delete Table 1012-1 and substitute the following:

Table 1012-1
AGGREGATE CONSENSUS PROPERTIES^(a)

Міх Туре	Course	Fine	Sand	Flat &
	Aggregate	Aggregate	Equivalent	Elongated
	Angularity ^(b)	Angularity		5 : 1 Ratio
		% Minimum	% Minimum	% Maximum
	ASTM	AASHTO	AASHTO	ASTM D 4791
	D 5821	T 304 Method A	T 176	Section 8.4
S 4.75 A		40	40	
SF 9.5 A				
S 9.5 B	75 / -	40	40	10 ^(c)
I 19.0 B				
B 25.0 B				
S 9.5 C				
S 12.5 C			-	
I 19.0 C	95 / 90	45	45	10
B 25.0 C			***************************************	***************************************
B 37.5 C				
S 12.5 D				
I 19.0 D	100 / 100	45	50	10
OGAFC	100 / 100	N/A	N/A	10

- (a) Requirements apply to the course aggregate blend and/or fine aggregate blend
- (b) 95/90 denotes that 95% of the course aggregate (+No.4 or + 4.75mm sieve)has one fractured face and 90% has two or more fractured faces.
- (c) Does not apply to Mix Types SF 9.5 A or S 9.5 B

Page 10-36, Subarticle 1012-1(C)1

Insert the following after the fourth paragraph on this page:

When natural sand is utilized in "C" or "D" level asphalt mixes, do not exceed the maximum natural sand percentage in the mix design and/or production aggregate blend detailed in Table 1012-1A.

Table 1012-1A

Uncompacted Void Content of Fine Aggregate AASHTO T 304 Method A	Maximum Percent Natural Sand Included in Mix Design and/or Production*
Less than 42.0	10
Equal to 42.0 to 44.9	15
Equal to 45.0 and greater	20

^{*}Maximum percent natural sand may be exceeded with approval from Pavement Construction Engineer upon satisfactory evaluation of pavement performance testing

FINE AGGREGATE ANGULARITY

Page 10-36, Subarticle 1012-1(C)6

Delete reference to AASHTO TP 33 Method A and substitute AASHTO T 304, Method A.

Page 10-37, Subarticle 1012-1(H)

Delete this Subarticle. It is a duplicate of Subarticle 1012-1(F) located on Page 10-36.

ASPHALT BINDER

Page 10-46, Article 1020-2

Delete the first paragraph under this Article and substitute the following:

Use Performance Graded Asphalt Binder meeting the requirements of AASHTO M 320. See Article 610-3 for the specified grades. Submit a Quality Control Plan for asphalt binder production in conformance with the requirements of AASHTO R 26 to the Materials and Tests Unit.

SP6R01

ASPHALT BINDER CONTENT OF ASPHALT PLANT MIXES:

 $11-21-00_{R}$

The approximate asphalt binder content of the asphalt concrete plant mixtures used on this project will be as follows:

Asphalt Concrete Base Course, Type B 25.0	4.3%
Asphalt Concrete Intermediate Course, Type I 19.0	4.7%
Asphalt Concrete Surface Course, Type S 4.75A	7.0%
Asphalt Concrete Surface Course, Type SF 9.5A	6.5%
Asphalt Concrete Surface Course, Type S 9.5	6.0%
Asphalt Concrete Surface Course, Type S 12.5	5.5%

The actual asphalt binder content will be established during construction by the Engineer within the limits established in the Standard Specifications or Project Special Provisions.

SP6R15

PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:

11-21-00

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the Standard Specifications as modified herein.

The base price index for asphalt binder for plant mix is \$218.06 per ton (metric ton).

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on September 1, 2004.

SP6R25

GUARDRAIL POSTS AND OFFSET BLOCKS:

06-22-04

Revise the 2002 Standard Specifications as follows:

Page 10-69, Subarticle 1046-3

Delete this sub-article in its entirety and replace with the following:

1046-3 POSTS AND OFFSET BLOCKS.

(A) General:

The Contractor may at his option furnish either of the following types of steel guardrail posts. Only one type of post will be permitted at any one continuous installation. Use structural steel posts throughout the project, unless otherwise directed or detailed in the plans.

- 1. Steel W6 x 8.5 or W6 x 9.0 posts
- 2. Steel 4.5" x 6.0" "C" shape posts (C150 x 12.2 kg/m)

The Contractor may at his option furnish either of the following types of treated timber posts if specifically directed or detailed in the plans. Only one type of post will be permitted at any one continuous installation.

- 1. Timber 6" x 8" (152 mm x 203 mm) posts.
- 2. Timber 8" x 8" (203 mm x 203 mm) posts.

(B) Structural Steel Posts:

Fabricate steel posts for guardrail of the size and weight shown on the plans from structural steel complying with the requirements of Section 1072. Metal from which C shape posts are fabricated shall meet the requirements of ASTM A570 for any grade of steel, except that mechanical requirements shall meet the requirements of ASTM A36. Punch or drill the holes for connecting bolts. Burning will not be permitted. After fabrication, the posts shall be galvanized in accordance with Section 1076.

(C) Treated Timber Posts:

Timber guardrail posts shall be of treated southern pine meeting the requirements of Article 1082-2 and 1082-3.

Bore bolt holes to a driving fit for the bolts. A minus tolerance of 1 percent will be allowed in the length of the post. Perform all framing and boring before the posts receive preservative treatment.

(D) Offset Blocks:

Provide 8-inch deep recycled plastic or composite offset blocks that have been approved for use with the guardrail shown in the standard drawings and/or plans. Only one type of offset block will be permitted at any one continuous installation. Prior to beginning the installation of recycled offset block, submit the FHWA acceptance letter for each type of block to the Engineer for approval.

Treated timber offset blocks with steel beam guardrail will not be allowed unless required by Specifications, directed by the Engineer or detailed in the plans. Steel offset blocks with steel beam guardrail will not be allowed.

Recycled plastic or composite offset blocks shall be made from no less than 50% recycled plastic or composite, and shall meet the following minimum requirements:

•	Specific Gravity:	0.950
•	Compressive Strength in Lateral Direction:	1600 psi (11 MPa)
•	Maximum Water Absorption:	10% by weight
•	Maximum Termite and Ant Infestation:	10%
•	Testing	Shall pass NCHRP Report 350,
		Test Level 3 by CRASH TESTING

Revise the 2002 Standard Roadway Drawings as follows:

Sheet 4 of 6, Standard 862.03, delete the note and substitute the following:

Note: The midpost and offset block of the WTR section will require special bolt hole drilling in the thrie beam offset block and line post.

SP8R57

GUARDRAIL ANCHOR UNITS, TYPE 350:

04-20-04

DESCRIPTION

Furnish and install guardrail anchor units in accordance with the details in the plans, the applicable requirements of Section 862 of the Standard Specifications, and at locations shown in the plans.

MATERIALS

The Contractor may at his option, furnish any one of the guardrail anchor units.

Guardrail anchor unit (ET-2000) as manufactured by:

TRINITY INDUSTRIES, INC. 2525 N. STEMMONS FREEWAY DALLAS, TEXAS 75207 TELEPHONE: 1-800-644-7976

The guardrail anchor unit (SKT 350) as manufactured by:

ROAD SYSTEMS, INC. 3616 OLD HOWARD COUNTY AIRPORT BIG SPRING, TEXAS 79720 TELEPHONE: (915) 263-2435

Prior to installation the Contractor shall submit to the Engineer:

- 1. FHWA acceptance letter for each guardrail anchor unit certifying it meets the requirements of NCHRP Report 350, Test Level 3, in accordance with Section 106-2 of the Standard Specifications.
- 2. Certified working drawings and assembling instructions from the manufacturer for each guardrail anchor unit in accordance with Section 105-2 of the Specifications.

No modifications shall be made to the guardrail anchor unit without the express written permission from the manufacturer. Perform installation in accordance with the details in the plans, and details and assembling instructions furnished by the manufacturer.

CONSTRUCTION

Guardrail end delineation is required on all approach and trailing end sections for both temporary and permanent installations. Guardrail end delineation consists of yellow reflective sheeting applied to the entire end section of the guardrail in accordance with Section 1088-3 of the Standard Specifications and is incidental to the cost of the guardrail anchor unit.

MEASUREMENT AND PAYMENT

Measurement and payment will be made in accordance with Articles 862.5 and 862-6 of the Standard Specifications.

SP8R65

STREET SIGNS AND MARKERS AND ROUTE MARKERS:

7-1-95

Move any existing street signs, markers, and route markers out of the construction limits of the project and install the street signs and markers and route markers so that they will be visible to the traveling public if there is sufficient right of way for these signs and markers outside of the construction limits.

Near the completion of the project and when so directed by the Engineer, move the signs and markers and install them in their proper location in regard to the finished pavement of the project.

Stockpile any signs or markers that cannot be relocated due to lack of right of way, or any signs and markers that will no longer be applicable after the construction of the project, at locations directed by the Engineer for removal by others.

The Contractor will be responsible to the owners for any damage to any street signs and markers or route markers during the above described operations.

No direct payment will be made for relocating, reinstalling, and/or stockpiling the street signs and markers and route markers as such work will be considered incidental to other work being paid for by the various items in the contract.

SP9R01

AGGREGATE PRODUCTION:

11-20-01

Provide aggregate from a producer who utilizes the new Aggregate Quality Control/Quality Assurance Program that is in effect at the time of shipment.

No price adjustment is allowed to contractors or producers who utilize the new program. Participation in the new program does not relieve the producer of the responsibility of complying

with all requirements of the Standard Specifications. Copies of this procedure are available upon request from the Materials and Test Unit.

SP10R05

FINE AGGREGATE:

11-19-02

Revise the 2002 Standard Specifications as follows:

Page 10-17, Table 1005-2

Make the following change to the table:

For Standard Size 2MS the following gradation change applies.

The minimum percent shown for material passing the No. 8 (2.36mm) sieve has been changed from 84 to 80.

SP10R15

BORROW MATERIAL

02-17-04

Revise the 2002 Standard Specifications as follows:

Page 10-44

Section 1018-2 II (b) Delete the last sentence in its entirety.

SP10R17

DRUMS:

07-16-02

Revise the 2002 Standard Specifications as follows:

Page 10-195, Subarticle 1089-5(C)

Delete the first (1st) sentence of the first (1st) paragraph and insert the following:

"Provide a minimum of three orange and two white alternating horizontal circumferential stripes covering the entire outside with each drum."

SP11R05

PORTABLE CONCRETE BARRIER:

11-19-02

Portable Concrete Barrier used on this project must meet one of the following:

 NC Approved NCHRP 350 Portable Concrete Barrier (design can be found at http://www.doh.dot.state.nc.us/preconstruct/traffic/congestion/TC/ or can be obtained by calling the Traffic Control Section at (919) 250-4159)

- Other NCHRP 350 Portable Concrete Barrier as approved by the Engineer and the Traffic Control Section
- NC Approved NCHRP 230 Portable Concrete Barrier in Roadway Standard Drawing 1170.01 manufactured before October 1, 2002

SP11R10

PAVEMENT MARKING GENERAL REQUIREMENTS:

07-16-02

Revise the 2002 Standard Specifications as follows:

Page 12-10, Subarticle 1205-3(J)

Delete the first (1st) sentence of the first (1st) paragraph and insert the following:

"Have at least one member of every pavement marking crew working on a project certified through the NCDOT Pavement Marking Technician Certification Process. For more information contact the Traffic Control, Marking and Delineation Section of the North Carolina Department of Transportation at 919-250-4151 or

http://www.doh.dot.state.nc.us/preconstruct/traffic/congestion/TC/"

SP12R01

REPLACE LENSES IN MARKERS:

10-14-04

The Contractor shall replace the lenses from the castings that are in place. Existing castings shall be cleaned without removing them from the pavement. The castings shall be cleaned in accordance with manufacturer's recommendations prior to replacing the lenses. The old lenses shall be replaced with new lenses, using adhesive required by the manufacturer.

Missing castings shall be replaced. Broken castings shall be removed and replaced. In both cases the "slot" for the castings shall be properly prepared prior to installing the new casting. Removal of broken castings and preparation of "slots" shall be considered incidental to the work of replacing castings and no direct payment will be made.

Lenses

The Contractor's attention is directed to the fact that Type III reflector lenses will be used. The reflector types and colors are as listed below.

TYPE FACE A FACE B

Type III Crystal Red

Payment will be made under:

Pay ItemPay UnitReplace Lenses in MarkersEach

GEOTECHNICAL ENGINEERING SCOPE OF WORK

10-12-04

1.0 GENERAL

The scope of work consists of developing an engineered retention system to safely reopen all lanes of traffic to the traveling public on I-40 between Mile Marker 3 and 4. The system will mitigate the 2 landslides on I-40 that have occurred as a result of the recent hurricanes.

Construct the retention system to stabilize the roadway before beginning any work for the toe scour protection.

The retention system and toe scour protection will be maintenance free.

The geotechnical firm should prepare geotechnical design recommendation reports for use in designing embankments, slopes, buttresses, retaining walls, toe scour protection, and temporary structures. The geotechnical firm should also determine if additional subsurface information is required based upon the subsurface information provided by NCDOT and the final roadway and structure designs. Perform any additional subsurface investigation and laboratory testing in accordance with the current NCDOT *Geotechnical Unit Guidelines and Procedure Manual*.

2.0 DESCRIPTION OF WORK

Design slopes, buttresses, retaining walls, toe scour protection, and temporary structures in accordance with the current allowable strength design AASHTO Standard Specifications for Highway Bridges, NCDOT Structure Design Manual, NCDOT Roadway Design Manual and the Geotechnical Engineering Unit Roadway and Structure Foundation Guidelines.

A. Slopes

Design all slopes to be maintenance free. Design all unreinforced fill slopes for a slope of 2:1 (H:V) or flatter and a minimum stability factor of safety of 1.3. Design all cut slopes for a slope of 1.5:1 (H:V) or flatter and a minimum stability factor of safety of 1.5. Use limiting equilibrium methods, such as Modified Bishop, Simplified Janbu, Spencer or any other generally accepted method for slope stability analysis.

B. Buttresses

Design all buttresses to be maintenance free. Design all buttresses for a minimum stability factor of safety of 1.3. Use limiting equilibrium methods, such as Modified Bishop, Simplified Janbu, Spencer or any other generally accepted method for slope stability analysis.

C. Retaining Walls

Design all permanent retaining walls to be maintenance free. Extensible reinforcement is not allowed for any permanent retaining walls. Modular block walls are not allowed for critical wall structures. Critical wall structures include

walls supporting or adjacent to interstate highways, bridge abutments, wing walls and walls over 18 feet (5.5 meters) in height.

The following list of retaining wall types are acceptable for consideration for permanent applications:

- Gravity wall
- Cast-in-place cantilever wall
- Modular block wall
- Mechanically stabilized earth (MSE) wall
- Soldier pile cantilever wall with either a cast-in-place face or precast panels
- Anchored tieback wall
- Soil nail wall

Design and construct permanent retaining walls, with the exception of gravity walls and cast-in-place cantilever walls, in accordance with the applicable NCDOT *Project Special Provisions*. For each retaining wall, with the exception of gravity walls, submit a wall layout and design. The wall layout submittal should include the following:

- Wall envelope with top of wall, bottom of wall, existing ground and finished grade elevations at incremental stations.
- Wall alignment with stations and offsets.
- Typical sections showing top and bottom of wall, drainage, embedment, slopes, barriers, fences, etc.
- Calculations for bearing capacity, global stability and settlement.
- Details of conflicts with utilities and drainage structures.
- Roadway plan sheets showing the wall (half size).
- Roadway cross sections showing the wall (half size).
- Traffic control plans showing the wall (half size).

Gravity walls must be designed and constructed in accordance with the NCDOT Roadway Standard Drawings and the NCDOT 2002 Standard Specifications. Gravity walls do not require any submittals. Cast-in-place cantilever walls must be designed and constructed in accordance with the NCDOT 2002 Standard Specifications.

Any slopes behind walls are required to be 2:1 (H:V) or flatter. Embed retaining walls in accordance with FHWA Manual Demonstration Project 82 Reinforced Soil Structures MSEW and RSS or a minimum of 2 feet (600 mm), whichever is greater. The wall embedment depth is from the grade that intersects the front of the wall (either finished grade or natural ground elevation) or 100 year scour elevation, whichever is lower, to the top of the leveling pad.

Drainage over the top of retaining walls is not allowed. Sags in the top of walls should be avoided. Direct runoff above and below walls away from walls, if possible, or collect runoff at the walls and transmit it away. Curb and gutter or cast-in-place single faced barrier with paving up to the wall is required when runoff can not be directed away from the back or front of the wall. A paved

concrete ditch with a minimum depth of 6 inches (150 mm) is required at the top of walls when slopes steeper than 6:1 (H:V) intersect the back of walls.

Precast or cast-in-place coping is required for walls without a cast-in-place face with the exception of when a barrier is integrated into the top of the wall. Extend coping or cast-in-place face a minimum of 6 inches (150 mm) above where the finished or existing grade intersects the back of the wall. Design concrete barriers integrated into retaining walls for traffic impact in accordance with AASHTO. A fence is required on top of the facing, coping or barrier or immediately behind the wall if there is no slope behind the wall.

D. Toe Scour Protection

Design all toe scour protection to be maintenance free. Design a toe scour protection system that is flexible, durable, impact and abrasion resistant and maintenance free. Design the toe scour protection system to withstand, intact, a sustained peak flow of 41,000 ft³/sec that is 20 feet in height above the stream bed.

Design and construct the toe scour protection system in accordance with FHWA *Hydraulic Engineering Circular No. 11 Design of Rip Rap Revetment.*

E. Temporary Structures

Design temporary retaining structures, which include earth retaining structures and cofferdams, in accordance with Section 4 of the 1995 or current allowable stress design AASHTO *Guide Design Specifications for Bridge Temporary Works* and the NCDOT Temporary Shoring for Maintenance of Traffic Special Provision. The only submittal required to use the standard sheeting design is the "Standard Shoring Selection Form".

Design and construct temporary retaining walls in accordance with the applicable NCDOT *Project Special Provision*. For temporary retaining walls, do not place a barrier within 5 feet (1.5 meters) of the face of the wall. If the barrier is between 5 and 9 feet (1.5 to 2.7 meters) from the face of the wall, anchor the barrier in accordance with Roadway Standard Detail No. 11.70.01.

3.0 SUBMITTALS

Submit all slope, buttress, retaining wall, toe scour protection, and temporary structure designs for review. Seal all design recommendation reports, plans, special provisions and calculations by a registered professional engineer licensed in the state of North Carolina.

If temporary shoring is required to construct a retaining wall, submit the temporary shoring design as part of the wall design submittal. A review time of 3 business days is required for each submittal.

4.0 CONSTRUCTION REQUIREMENTS

All construction and materials must be in accordance with the NCDOT 2002 Standard Specifications and current NCDOT Project Special Provisions. The Contractor is responsible for investigating and proposing remedial measures for any construction

problems related to foundations, retaining walls, subgrades, settlement, slopes, and construction vibrations. The NCDOT Geotechnical Engineering Unit will review and approve these proposals.

Do not allow vibratory compaction of fill within 100 feet (30 meters) of any existing structure. Do not allow pile driving or subsurface drilling of foundations within 500 feet (150 meters) of any existing structure. If these requirements can not be met or damage occurs to any existing structure, employ the services of a qualified private engineering firm experienced in the effects of construction induced vibrations on existing structures, to do a study of the structure's response to vibration. The purpose of this study is to set vibration limits to avoid damage to the existing structure and provide modifications to construction methods as necessary. Any existing structure is not intended to include existing bridges unless they are historic or will remain in service upon completion of construction. Existing bridges used for detours that will be taken out of service upon completion of construction should be protected from vibration damage to the extent necessary for the safety of the traveling public.

Geotechnical Engineering Unit ROADWAY AND STRUCTURE FOUNDATION GUIDELINES

The geotechnical firm is responsible for (but not limited to) addressing the following items for the roadway and structure foundation design of the project.

- 1. Analyze the stability of embankments and utilize recognized geotechnical engineering designs and construction methods to ensure embankment stability.
- 2. Determine the feasibility and recommend types of retaining walls or shoring for permanent or temporary situations. Design all retaining walls in accordance with the current allowable stress design AASHTO *Standard Specifications for Highway Bridges* and applicable FHWA manuals.
- 3. Analyze the stability of cut sections. Utilize recognized geotechnical engineering designs and construction methods to ensure cut slope stability.

The geotechnical firm's attention is directed to the latest design guide entitled *Soils and Foundations Workshop Manual*, NHI Course No. 13212, Publication No. FHWA HI-88-009, published by the FHWA.

TOE SCOUR PROTECTION

October 12, 2004

1.0 GENERAL

Construct the Toe Scour Protection in accordance with Section 235 of the 2002 Standard Specifications, the details shown on the plans, this provision, and as directed by the Engineer. Schedule a preconstruction meeting with representatives of the Contractor, Geotechnical Engineering Unit, and the Engineer.

The Toe Scour Protection will be required at Stations $15+00 \pm to 21+75 \pm -L$, and at Stations $32+75 \pm to 35+25 \pm -L$, and other locations as directed by the Engineer.

Density requirements will not apply to the Toe Scour Protection construction, but compact to the satisfaction of the Engineer.

2.0 CONSTRUCTION

Unless otherwise directed by the Engineer, construct the Toe Scour Protection with the slopes as indicated on the plan detail. Grade the rock so that the smaller pieces are uniformly distributed throughout the mass. The surface must be free of obstructions, debris, and segregated pockets of small pieces or groups of large pieces, which could cause large open voids within the rock mass.

Place Filter Fabric as detailed in the plans. Grade the surfaces that receive Filter Fabric to lines and grades shown on the plans, unless otherwise directed by the Engineer. The surface must be free of obstructions, debris, and large voids.

At the time of installation, the Filter Fabric will be rejected if it has defects, rips, holes, flaws, deterioration, or damage incurred during manufacture, transportation or storage.

Lay the Filter Fabric smooth and free from tension, stress, folds, wrinkles, or creases. Where a layer of Filter Fabric becomes discontinuous, such as at the end of a roll, a minimum overlap of 12 inches is required with the upper fabric placed over the lower fabric. Use wire staples as needed to hold the fabric in place until it is covered with fill material. Do not operate equipment directly on the fabric. In the event fabric is displaced or damaged, reposition or replace the fabric at no additional cost to the Department.

Place the Rock Embankment Material in maximum 4-foot lifts.

Place a 9-inch thick layer of Rip Rap, Class A on top of each lift of the Toe Scour Protection.

Place Select Material, Class VI (#57 stone backfill) on top of the final lift of Rip Rap, Class A. Compact #57 stone backfill with at least four passes of an 8 - 10 ton (or heavier) vibratory roller in the vibratory mode, or as directed by the Engineer.

Lay the Ring Nets smooth and free from folds, wrinkles, or creases. Where a layer of Ring Nets becomes discontinuous, such as at the end of a roll, a minimum overlap of 12 inches is required with the upper Ring Net placed over the lower Ring Net. Stake as needed to hold the ring nets in place until it is covered with fill material. Do not operate equipment directly on the Ring Nets. In the event the Ring Nets are displaced or damaged, reposition or replace the Ring Net at no additional cost to the Department.

3.0 MATERIALS

A. Rock Embankment Material

For the purposes of this provision Rock Embankment Material refers to clean, non-degradable, durable, blasted rock material with a diameter of at least 2 feet but not greater than 4 feet. The Contractor shall identify the material source for approval by the Engineer before the preconstruction meeting. On-site material meeting the 2 to 4 foot diameter criteria may be used. The rocks must have a minimum density of 160 pounds per cubic foot and a minimum weight of 1200 pounds each.

B. Select Material, Class VI

The top 12 inches of the material on top of the Toe Scour Protection must be Select Material, Class VI (#57 stone) meeting the requirements of Section 1016 of the 2002 Standard Specifications.

C. Rip Rap, Class A

The top of each lift must be Rip Rap, Class A meeting the requirements of Section 1042 of the 2002 Standard Specifications.

D. Filter Fabric

For Filter Fabric use Type 2 Engineering Fabric meeting the requirements of Section 1056 of the 2002 Standard Specifications. Furnish a Type 1 Certified Mill Test Report, Type 2 Certified Mill Test Report, or Type 4 Certified Mill Test Report for the fabric in accordance with Article 106-3; however, the material will be subject to inspection, test, or rejection by the Engineer at any time.

E. Ring Net

Obtain Ring Net materials from:

Geobrugg North America, LLC Geobrugg Protection Systems 551 W. Cordova, PMB 730 Santa Fe, New Mexico 87505 (505) 438-6161 www.us.geobrugg.com

The Ring Nets shall be ROCCO 12/3/300. The nets shall be made from interlocking steel rings, each ring with a nominal diameter of 12 inches. Rings shall be composed of steel wire coiled into a loop with 12 loops per ring. Three steel clips shall be fastened around each ring to hold the ring together. Each ring shall connect to the four adjoining rings by passing through them.

The Ring Nets shall be manufactured and assembled in accordance with the contract documents and plans and the manufacturer's standards and requirements.

The wire shall be high tensile strength alloy steel wire with a nominal diameter of 0.118 inches and the minimum tensile strength of the wire shall be 256,000 pounds per square inch.

The wire shall be galvanized with Supercoating[®], a 95% zinc / 5% aluminum coating, and the minimum weight of the coating shall be 0.655 ounces per square foot.

4.0 METHOD OF MEASUREMENT

A. Rock Embankment Material

The quantity of Rock Embankment Material to be paid for will be the actual number of tons, which has been incorporated into the completed and accepted work. The material will be measured by weighing in trucks on certified platform scales or other certified weighing devices or by methods approved by the Engineer.

B. Select Material, Class VI

The quantity of Select Material, Class VI (#57 stone) to be paid for will be the actual number of tons, which has been incorporated into the completed and accepted work. The material will be measured by weighing in trucks on certified platform scales or other certified weighing devices or by methods approved by the Engineer.

C. Rip Rap, Class A

The quantity of Rip Rap, Class A to be paid for will be the actual number of tons, which has been incorporated into the completed and accepted work. The material will be measured by weighing in trucks on certified platform scales or other certified weighing devices or by methods approved by the Engineer.

D. <u>Filter Fabric</u>

The quantity of Filter Fabric to be paid for will be the area in square yards, measured along the surface of the ground, over which the fabric has been acceptably placed. No separate measurement for payment will be made for the overlapping of fabric.

E. Ring Net

The quantity of Ring Net to be paid for will be the area in square yards, measured along the face of the Ring Net, over which the net has been acceptably placed. All hardware required shall be incidental to the cost of the Ring Nets.

5.0 BASIS OF PAYMENT

A. Rock Embankment Material

The quantity of Rock Embankment Material will be paid for at the contract unit price per ton for "Rock Embankment Material." Payment will be full compensation for all work and materials covered by this provision, including but not limited to furnishing, hauling, handling, placing, compacting, and maintaining the select material.

B. Select Material, Class VI

The quantity of select material will be paid for at the contract unit price per ton for "Select Material, Class VI." Payment will be full compensation for all work and materials covered by this provision, including but not limited to furnishing, hauling, handling, placing, compacting, and maintaining the select material.

C. Rip Rap, Class A

The quantity of Rip Rap, Class A will be paid for at the contract unit price per ton for "Rip Rap, Class A." Payment will be full compensation for all work and materials covered by this provision, including but not limited to furnishing, hauling, handling, placing, compacting and maintaining the select material.

D. Filter Fabric

The quantity of Filter Fabric will be paid for at the contract unit price per square yard of "Filter Fabric." Payment will be full compensation for all work covered by this provision, including but not limited to testing, furnishing, hauling, placing, and overlapping the filter fabric.

E. Ring Net

The quantity of Ring Net will be paid for at the contract unit price per square yard of "Ring Net." Payment will be full compensation for all work covered by this provision, including but not limited to testing, furnishing, hauling, placing, and connecting the ring nets. All hardware required shall be incidental to the cost of the Ring Nets.

Payment will be made under

Rock Embankment Material	
Select Material, Class VI	Tons
Rip Rap, Class A	Tons
Filter Fabric	Square Yards
Ring Net	Square Yards

PERMANENT ANCHOR TIEBACK RETAINING WALL:

10-12-04

1.0 General:

The work under this section consists of design, plan preparation, furnishing materials, and construction of proposed Permanent Tieback Retaining Wall No. 1 from Station 17+00.00 -L- to Station 22+25.00 -L-, and proposed Permanent Tieback Retaining Wall No. 2 from Station 33+00.00 -L- to Station 35+00.00 -L- in accordance with the plans, these specifications and in reasonably close conformity with the lines, grades, and dimensions shown on the plans.

A permanent anchor tieback anchor retaining wall consists of soldier piles and timber lagging supported by post-tensioned ground anchors with permanent precast concrete facing.

Submit 8 copies of plans and calculations to the Engineer for review and approval and allow 5 calendar days from the date they are received until they are returned by the Engineer.

A pre-construction meeting must be held prior to the start of the work and must be attended by representatives from the Prime Contractor, Wall Subcontractor, Resident Engineer, Materials and Test Unit, and Geotechnical Engineering Unit to discuss construction details and inspection of the wall construction. Review of all submittals must be completed prior to scheduling the pre-construction meeting.

No value engineering construction proposal will be allowed.

2.0 Design Criteria:

Wall design must be in accordance with the criteria set forth in the AASHTO Specifications for Highway Bridges and the FHWA Manual "Ground Anchors and Anchored Systems Manual", Publication No FHWA-IF-99-015.

Use the soil parameters shown on the plans to design the tieback wall.

Design all wall components for a 100-year design life.

Include calculations and details of the precast concrete facing in the design package. Design a minimum 6 inch (150 mm) thick precast concrete facing to be constructed on a minimum 6 inch (150 mm) thick by 12 inch (300 mm) wide unreinforced concrete

leveling pad. Construct the concrete facing of the tieback retaining wall in accordance with Section 825 of the Standard Specifications with an ordinary surface finish.

Embed the wall a minimum of 24 inches (600 mm) below the proposed finished grade in front of the wall.

Install soldier piles a minimum of 5 feet (1.5 meters) into competent bedrock.

Install permanent tieback anchors through boulder fill into competent bedrock.

Provide plans containing sufficient information to lay out and construct the wall including but not limited to the following:

- 1. Elevation views showing all proposed and existing ground lines and stations, soldier piles, precast concrete facing panels, leveling pad elevations, construction joint locations.
- 2. Plan views showing all horizontal layout information.
- 3. Section views showing in detail all wall components, the proximity of other structures, proposed and existing ground lines, etc.

1.

- 4. Specific details of wall components.
- 5. Construction sequence.

3.0 Materials:

All materials are to be as specified or better, and as approved by the Engineer. Submit requests for substitutions to the Engineer five days before intended installation.

- A. Fabricate tieback tendons from single or multiple elements of the following:
 - 1. Steel bars conforming to ASTM Designation A722, "Uncoated High-Strength Steel Bars for Prestressed Concrete."
 - 2. Seven-wire strand conforming to ASTM Designation A416/416M, "Uncoated Seven-Wire Stress-Relieved Strand for Prestressed Concrete."
 - Compact seven-wire strands conforming to ASTM Designation A779, "Uncoated Seven-Wire Compacted, Stress-Relieved Steel Strand for Prestressed Concrete."

Submit to the Engineer mill test reports for each heat or lot of prestressing material used to fabricate tendons.

B. Submit cement anchor grout mix design to the State Materials Engineer for approval. Supply Portland Cement conforming to ASTM Specification C-150, Type

I, II, or III, and potable water. Supply cement that is fresh, free from lumps or any indication of hydration. Use admixtures that will impart low water content, flowability and minimum bleeding in the cement grout only with the consent of the Engineer. Do not use admixtures that contain chemicals that may have a harmful effect on the prestressing steel or cement. If admixtures are to be used, submit to the Engineer prior to using the admixture, the manufacturer's literature indicating the type of admixture and the manufacturer's recommendations for mixing the admixtures with grout. Expansive additives which cause air bubbles in the grout will not be allowed. Use grouting equipment that includes a mixer capable of producing a grout free of lumps and undispersed cement. Use a positive displacement grout pump. Equip the pump with a pressure gauge to monitor grout pressures at the nozzle, using a gauge capable of measuring pressures of at least 150 psi (1035 kPa), or twice the actual grout pressures used.

Size the grouting equipment to enable the tieback to be grouted in one continuous operation. Use mixing and storage times that do not cause excessive temperature build-up in the grout. Use a mixer capable of continuously agitating the grout.

C. Use anchorage and hardware suitable for the type of anchor tendon used and capable of developing 95% of the guaranteed specified minimum ultimate tensile strength of the tendon when tested in the unbonded state without failure of the tendon. Supply anchorage devices capable of holding the prestressing steel at a load producing a stress of not less than 95% of the guaranteed specified minimum ultimate tensile strength of the prestressing steel without exceeding anticipated set and without failure of either the anchorage or the prestressing steel. Anchorages shall be capable of lift-off, detensioning or retensioning a tendon at any time prior to grouting.

Fabricate the bearing plate from steel plate conforming to AASHTO M270 Grade 250 Specifications. Size the bearing plate so that the bending stress in the plate does not exceed 0.75 times the yield strength of the steel at the tieback design load or 1.00 times the yield strength of the steel at the maximum tieback test load.

Provide polyvinyl chloride (PVC) trumpets made from Type I, Schedule 40, Grade PVC 1120 pipe conforming to the requirements of ASTM D-1785. The plastic material shall be resistant to aging by ultra-violet light.

Provide steel trumpets made from pipe or tube conforming to the requirements of ASTM A-53 for pipe and ASTM A-500 for tubing.

Provide trumpets with an inside diameter equal to or larger than the hole in the bearing plate furnished by the tendon supplier, and long enough to accommodate movements of the structure during testing and stressing. For strand tendons, consult the tendon supplier to determine the minimum length trumpet required to make a transition from the diameter of the tendon in the unbonded length to the diameter of the tendon at the anchorhead. Provided a watertight seal between the trumpet and the unbonded length corrosion protection.

If grout is used to fill the trumpet, then the seal is temporary and it acts as a grout form. If corrosion inhibitor is used to fill the trumpet, then the seal is permanent and it shall be fabricated from Buna-N-synthetic rubber or equal.

Furnish anchor nuts and plates for bars having complementary spherical shapes at the contact areas.

Furnish anchorheads of either steel meeting the requirements of AASHTO M270 Grade 250, or cast ductile iron meeting the requirements of ASTM A-536 Grade 80-55-06.

D. Use corrosion inhibitor (grease) conforming to the following test requirements:

Chlorides 10 ppm max. by ASTM B-512
Nitrates 10 ppm max. by ASTM D-992
Sulfides 10 ppm max. by APHA 427D(15th ED)

The corrosion inhibitor (grease) must remain ductile and free from cracks and must not become fluid over the anticipated range of temperatures encountered during fabrication, transport, storage and while in service. The inhibitor must be impervious to moisture and air, be a self-healing film and displace water. The corrosion inhibitor must have a reserve alkalinity for long-term acid neutralization.

- E. Epoxy Coating: Epoxy coating must be an electrostatically applied coating meeting M-284 (ASTM A-775). Any required field patching must meet ASTM A-775 or ASTM D-3196.
- F. Corrugated Tubes: The following corrugated tubes will be acceptable:
 - 1. High density corrugated polyethylene (PE) tubing conforming to the requirements of AASHTO M252-851.
 - 2. High density corrugated polypropylene (PP) tubing manufactured from plastic classified as Type II-26500-D by ASTM D-2146. The minimum wall thickness of the tubing shall be 0.04 inches (1.0 mm).
 - 3. Corrugated polyvinyl chloride (PVC) tubes with a minimum wall thickness of 0.04 inches (1.0 mm).
- G. Heat Shrinkable Tube: Heat shrinkable tubing must have an outer heat shrinkable polyethylene plastic internally coated with a thixotropic sealant. Recovered wall thickness must be at least 0.04 inches (1.0 mm). Coating thickness must be at least 0.02 inches (0.50 mm).
- H. Bondbreaker: Use any of the following bondbreakers:

- 1. Bar Tieback Tendon: Low density polyethylene tubing, polypropylene tubing or polyvinyl chloride tubing with a minimum wall thickness of 0.06 inches (1.50 mm).
- 2. Strand Tieback Tendon: A polyethylene tube or a hot melt extruded polypropylene tube with a minimum wall thickness of 0.06 inches (1.50 mm).
- I. Electrical Insulation: The electrical insulation must be a multipolymer plastic sheet manufactured expressly for bearing purposes. Fabricate the electrical insulation from a material that is: an electrical insulator; resistant to attack from cement; the corrosion inhibitor, or the environment; nondetrimental to the prestressing steel; prevents oxygen and moisture from coming in contact with the anchorage or bearing plate; and is capable of withstanding atmospheric exposure and ultra-violet light degradation if the anchorhead is to remain exposed to the atmosphere.
- J. Steel members used as soldier piles must conform to the applicable sections of the Standard Specifications. Steel piles must contain 0.2% minimum copper, and must be ASTM Grade A36 or better. Stiffeners at the anchor location must be 0.75 inch (19 mm) thick steel plates and must be ASTM Grade A36 or better and 0.2% copper, or must be painted (including welds) with two coats of zinc-rich paint.
- K. Concrete and reinforcing steel must conform to the applicable sections of the Standard Specifications.
- L. Concrete for coping must be Class A and conform to the applicable requirements in sections 420 and 1000 of the Standard Specifications. Reinforcing Steel in coping must conform to the applicable requirements in sections 425 and 1070 of the Standard Specifications.
- M. Filter fabric on the backside of the wall, used in conjunction with a granular material or with a molded, polymeric core must conform to Section 1056-1 of the Standard Specifications.
- N. Drain pipes installed along the lower portions of the wall near the leveling pad or footing must conform to Section 815 of the Standard Specifications.
- O. Timber lagging must conform to the requirements of Section 1082-1 of the Standard Specifications and Table 16 entitled Recommended Thickness of Wood Lagging in Appendix C of the AASTHO "Construction Handbook for Bridge Temporary Works" or page 82 of FHWA Ground Anchors Manual.
- P. Class VI Select Material (#57 Stone) must conform to the requirements of Section 1005 and Section 1016 of the Standard Specifications.

4.0 Concrete Panels

Cast concrete face panels and apply the requirements of Sections 1000 and 1077 of the Standard Specifications.

A. Materials and Fabrication

Supply concrete for precast panels that attains the 28 day compressive strength as required by the submitted tie back wall design and plans.

Provide materials and fabricate members in accordance with the requirements of Division 10 of the Standard Specifications for Roads and Structures.

B. Miscellaneous

1. Casting

Set all panel components in place in the forms to conform to the details on the plans and accepted shop plans prior to casting. Cast the panels on a flat area with the front face of the form at the bottom and the rear face at the top.

2. Concrete Finish

Provide an ordinary surface finish as defined by Subarticle 420-18(B) of the Standard Specifications for the front face (exposed face of wall). Screed the rear face of the panel to a uniform surface finish to eliminate open pockets of aggregate and surface distortions in excess of 1/4 inch (6 mm).

3. Tolerances

Manufacture all units within the following tolerances:

- 4. All dimensions within 3/16 inch (5 mm).
- b. Surface defects on formed surfaces are not to exceed 1/8 inch in 5 feet (3mm in 1.5 m).

4. Marking

Clearly scribe the date of manufacture, the production lot number, and the piece-mark on the rear face of each panel.

5. Handling, Storage and Shipping

Handle, store and ship all units in such manner as to eliminate the danger of discoloration, chipping, cracks, fractures and excessive bending stresses. Support panels in storage on firm blocking. Store panels in a horizontal position and stack no more than six high.

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5.0 Corrosion Protection:

A. General:

Prestressed anchors and the anchor head assembly must be doubly protected against corrosion. The cement grout in the bond zone constitutes one protection system; cement grout in the unbonded zone does not constitute a protection system. Corrosion protection begins with the storage, fabrication, and handling of the tendon components prior to insertion in the borehole. Proper care is required to avoid prolonged exposure to the elements, and to avoid mechanical or physical damage which would reduce or impair the future ability of the components to resist any adverse conditions encountered during their service life.

B. Tendon Fabrication:

Fabricate tendons in accordance with approved details and free of dirt, detrimental rust, or other deleterious substances. Install the plastic sheath at the fabrication shop as a single piece without splices. Field installation of the plastic sheath shall not be allowed. Prior to installation, handle and store tendons in such a manner as to avoid corrosion and physical damage. Field repair damaged coatings with ultra-high molecular weight polyethylene tape or heat shrinkable tubing. Damage such as abrasions, cuts, nicks, welds, weld splatters, or heavy corrosion and pitting, will be cause for rejection of the tendon. Replace rejected tendons at no cost to the Department in terms of either material replacements and/or resulting time delays.

1. Strand Tendon:

Apply a polyethylene tube or a hot-melt extruded polypropylene tube over a corrosion inhibiting grease coated strand for the entire unbonded length of each individual strand of the tieback tendon. Coat the individual wires of each tendon with grease to completely fill the space between the tube and the strand, making provisions to prevent the grease from escaping at the ends of the tubes. Place the bond length and lower two feet of the unbonded length in a corrugated tube. Centralize the tendon within the corrugated tube with a minimum of 0.02 inches (0.50 mm) of grout cover. Use spacers along the bond length to separate the strands so the tendon will bond to the encapsulation grout. Mix with the encapsulation grout, if desired, admixtures which control bleed water, improve flowability, reduce water content and are expansive. Three options for grouting inside the encapsulation are available:

- a. Grout the tendons inside the encapsulation after the tendon has been placed in the drill hole, or
- b. Grout the tendons inside the encapsulation prior to inserting the tendon in the drill hole and then place in the drill hole provided the grout has not achieved initial set or a maximum of 45 minutes, or

c. Grout the tendons and allow to set inside the encapsulation for a period of 24 hours prior to inserting the tendon in the drill hole. In this case, support the entire length of tendon at sufficient intervals during installation such that excessive bending does not occur.

2. Bar Tendon:

Epoxy coat the bar tendon with a minimum thickness of 0.008 inches (0.20 mm). Install a tight fitting bondbreaker around the encapsulated bar over the unbonded length.

6.0 Construction:

A. Excavation and Backfill:

Coordinate scheduling with the Wall Subcontractor such that earthwork and wall construction can be accomplished at a minimum of delay to each.

Excavation must be in reasonably close conformity to the limits and construction stages shown on the plans or specified in the contract and limited to that necessary to install the lagging.

B. Temporary Earth Support:

Construct temporary earth support between soldier piles such as to be safe and provide adequate resistance to earth loads. Use sound materials, free of defects, and placed in a workmanlike manner.

Fill small voids behind the lagging with hand tamped on site soils.

C. Soldier Piles:

Set all soldier piles in pre-augered or drilled holes. Keep holes open, if required, by casing or other means approved by the Engineer. Place concrete such that free fall greater 5 feet (1.5 meters) does not occur. Use a lean sand grout mixture to fill the remainder of the hole to the ground surface. Remove this mixture as required to install the timber lagging. Set piles and concrete holes as soon as practical after drilling. At no time shall more than 5 holes be left open before setting piles and concreting.

Shaft excavation must conform to the applicable provisions of Section 410 of the Standard Specifications. Haul off and waste material resulting from shaft excavation. Do not place shaft excavation on the slope. Provide Class A concrete meeting the requirements of Section 1000 of the Standard Specifications or as approved by the Engineer. Design the Class "A" concrete with a 6-inch to 8-inch slump.

Cast shaft concrete against undisturbed ground unless otherwise permitted by the Engineer, and construct in accordance with Section 825 of the Standard Specifications. If over-excavation occurs vertically, backfill with #57 Stone Backfill before setting the

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pile. Remove all loose and soft material and dewater the excavation immediately before and during the concrete casting operation. Make the top of the concrete shafts generally level.

D. Anchor Installation:

The holes for the anchors must be drilled. Core drilling, rotary drilling, auger drilling or percussion drilling may be used. If water is used in the drilling operation, dispose of the water in such a manner that erosion of the wall site is minimized. Any damage to the site by water erosion shall be repaired by the Contractor at no cost to the Department. If the hole will not stand open, install casing as required to maintain a clean and open hole. Provide a hole diameter not less than 3 inches (75 mm) if no pressure grouting is used. Pressure grouting is defined as grouting with a pressure greater than 60 psi (415 kPa). Use a drill bit with a diameter not less than 0.12 inches (3 mm) smaller than the specified hole diameter. The hole shall be within 3 inches (75 mm) of plan location and drilled to the inclination specified on the approved design plans within a three degree tolerance. Do not extend holes outside the right-of-way limits. Thoroughly clean holes in rock of all dust, rock chips, grease or other deleterious material prior to inserting the tendon.

Install the tendon in the casing or hole drilled for the anchor, taking care to insure that the tendon's corrosion protection is not damaged during handling or installation. If the sheathing has been damaged, repair it with ultra high molecular weight PE tape. Wind the tape spirally around the tendon so as to completely seal the damaged area. Use a pitch of the spiral to ensure a double thickness at all points. Install the tendon in the bond length in such a way as to insure that it has a minimum of 0.5 inch (13 mm) grout cover. Degrease the bond length of strands or wires prior to installation by using Acetone, MEK, or MIBK leaving no residue on the tendon. Other substances may be used subject to approval by the Engineer. Include all costs of cleaning tendons in the price bid for Contract items.

Drill holes 1 foot (0.3 meter) minimum longer than tendons. Insert the tendon after the hole is drilled to the final depth. Do not subject anchor tendons to sharp bends. Provide centralizers at maximum 10 foot (3.0 meters) center-to-center spacing throughout the bond length to insure that the tendons do not contact the wall of the drill hole, with the lowest centralizer no more than 5 feet (1.5 meters) from the bottom of the bond length. Do not use centralizers made of wood or any other material detrimental to the tendon steel or sheathing. If multi-element tendons are used without a fixed anchorage at the lower end, provide adequate spacing of the tendon elements to achieve proper grout coverage. Do not use anchors for grounding electric equipment.

Perform the grouting operation after the tendon is inserted. Inject grout at the lowest point of the anchor. Place grout over the entire anchor length. Do not allow the top of the grout column to contact the wall or the trumpet. After grouting, the tendon shall remain undisturbed until the grout has cured for at least 72 hours. Record the following data during the grouting operation:

- a. Type of mixer
- b. Water/cement ratio
- c. Type of additives
- d. Grout pressure
- e. Type cement
- f. Test sample strengths (prior to stressing)
- g. Volume of grout placed in bond and free lengths

After lockoff of the post-tension force, fill the trumpet with non-bleed, expansive grout, or grease. Coat the exposed surface of the anchorage with mastic, and cover with a metal cap or Portland Cement concrete.

E. Anchor Testing and Stressing:

Each anchor must be tested. The maximum test load must not exceed 80% of the guaranteed ultimate tensile strength of the tendon. Conduct performance tests for the first two anchors installed for each specified design load capacity and 5% of the remaining anchors at locations to be chosen by the Engineer. Proof test all remaining anchors. Install no additional anchors until the first two anchors have been successfully performance tested.

Anchors extending through #57 stone fill must not be fully tensioned until fill is placed to the full height of the wall. Anchors may be partially tensioned only once fill has been placed to the same level as the anchors. The partial tension load must not cause the soldier piles to move out of alignment tolerances.

1. Performance Tests:

Do performance tests by incrementally loading and unloading the anchor in accordance with the following schedule. Record the movement of the tendon to the nearest 0.001 inch (0.025 mm) with respect to an independent fixed reference point. The jack and pressure gauge shall have been calibrated as a unit. Use a pressure gauge graduated in 100 psi (700 kPa) increments or less. Use a master gauge to verify the accuracy of the production gauge at the beginning of each shift.

Cycle	Load	Cycle Load
1	0	5 0.50P
	0.25P	0.75P
	AL	1.00P
2	0.25P	1.20P
	0.50P	1.33P
	0.25P	1.20P
	AL	1.33P*
3	0.50P	Adjust to lockoff load.
	0.75P	Actual lock-off loads may be
	0.50P	somewhat higher to account

	67	Haywood County
	AL	for seating losses.
		* Hold 50 minutes for creep test.
4	0.50P	-
	0.75P	
	1.00P	AL (Alignment Load)
	0.75P	P (Design Load)
	0.50P	, ,
	AL	

To prevent misalignment of testing equipment, maintain a minimum Alignment Load (AL) of 0.05P.

Hold each load increment until movement ceases, or a minimum of 1 minute. Submit loading and unloading rates (tons per minute) for approval. Apply each load in less than 30 seconds after the jack pump is started.

Perform a Creep Test by holding the 1.33P load for 50 minutes. While maintaining a constant load, record anchor movement (total movement) at 0, 1/2, 1, 3, 5, 10, 20, 30, 40 and 50 minutes. Begin the observation time when load is applied to the pump.

The Engineer will review all performance tests to determine if the anchor is acceptable. An anchor shall be acceptable if:

- 1) The total elastic movement obtained exceeds 80% of the theoretical elastic elongation of the free length.
- 2) The creep movement does not exceed 0.08 inches (2 mm) during the 5 minutes to 50 minutes time increments regardless of tendon length and load.

2. Proof Tests:

Contract C201320

Perform proof tests by incrementally loading and unloading the anchor in accordance with the following schedule. Record the movement of the tendon to the nearest 0.001 inch (0.025 mm) with respect to an independent fixed reference point. Monitor the jack load with a pressure gauge or load cell.

0 0.25P 0.50P 0.75P 1.00P 1.20P 1.33P (Hold for creep test) Adjust to lockoff load.

Actual lockoff load may be somewhat higher to account for seating losses.

Perform a Creep Test by holding the 1.33P load for 5 minutes. Holding the load constant, record anchor movement (total movement) at 0 second, 30 second, 1 minute, 3 minute, and 5 minute intervals. Begin observation times the moment the jack begins to apply the 1.33P load. If the movement between the 30 second and the 5 minute reading is 0.08 inches (2 mm) or more, maintain the load for an additional 45 minutes and record the movement at 10, 20, 30, 40, and 50 minutes. Record all movements in relation to a fixed reference point. The acceptance criteria shall be as in A and B above.

3. Lift-Off Tests:

Make a lift-off reading of all anchors after transferring the load to the end anchorage and prior to removing the jack. The load determined shall be within 5% of lockoff load. If the lift-off load is not within this tolerance, reset the end anchorage and make another lift-off reading. Perform lift-off tests within 7 days of when the load was locked-off in the anchor.

After five lift-off tests are performed, the Engineer will *specify* lift-off tests be performed on a random basis such that the total number of tests will be on no more than 10% of the remaining anchors.

4. Cutting of Tendon Protrusions:

After an anchor has been accepted by the Engineer, the portion of the anchored tendon protruding over the anchor may be cut, if not otherwise required for use in retesting. Cutting must be done according to the tendon manufacturer's recommendations as approved by the Engineer. Care must be taken not to damage the tendon anchor.

5. Redesign:

If anchors fail during performance tests or proof tests, modify the design or construction procedures, subject to review by the Engineer. These modifications may include reducing the anchor design load by increasing the number of anchors, increasing the grout pressure, requiring post-grouting or increasing the bond length. Any modification of design or construction procedure will be at no cost to the Department. Install the redesigned anchors in the wall and test as previously defined at no cost to the Department.

Those anchors that fail the performance or proof tests may be incorporated in the wall. Propose a reduced Design Load and retest as noted above. Acceptance of such anchors will be at the discretion of the Department.

7.0 Records

Provide the Engineer with the following records:

- 1. As-built drawings showing the location of the tiebacks, total tieback length, anchor length, and unbonded length one month after completion of the tieback installation.
- 2. Steel and grout certifications and mill reports prior to incorporating these materials in the work.
- 3. Grouting records indicating the cement type, quantity injected, and the grout pressures twice a week.
- 4. Tieback test results twice a week.

8.0 Method of Measurement

Contract C201320

- A. <u>Permanent Anchor Tieback Retaining Wall</u> The quantity of Permanent Anchor Tieback Retaining Wall to be paid for will be the actual final square feet (square meters) of exposed retaining wall face. Measurement will be made vertically from the finished grade at the bottom of the wall to the bottom of the concrete coping.
- B. <u>Class VI Select Material</u> (#57 Stone) The quantity of Class VI Select Material to be paid for will be the actual number of cubic yards (cubic meters) of this material which has been placed as backfill behind the wall within the limits as shown on the plans and as directed by the Engineer.
- C. <u>Grout for Tieback Anchors</u> The quantity of Grout for Tieback Anchors to be paid for will be the actual number of cubic yards (cubic meters) of this material which has been placed as shown on the plans and as directed by the Engineer.

9.0 Basis of Payment

A. Permanent Anchor Tieback Retaining Wall

Payment will include all costs for concrete, reinforcing steel, shaft excavation, lagging, piles, anchors, furnishing and placing precast concrete panels, labor, design and all other materials and equipment including but not limited to drilling holes, post-tensioning, performing and evaluating all tests, submitting records of tests, all tools and all other miscellaneous items necessary to complete the work, including concrete coping and drainage above and below wall, with the exception of the items noted below.

Excavation of the material in front of the retaining wall will be paid for as "Unclassified Excavation" in accordance with Section 225 of the Standard Specifications.

Payment will be made under:

B. Class VI Select Material (#57 Stone)

The quantity of Class VI Select Material (#57 Stone), measured as provided above will be paid for at the contract unit price per cubic yard (cubic meter) for "Class VI Select Material for Permanent Anchored Wall". Such price and payment will be considered full compensation for furnishing, hauling, excavating into existing ground, and compacting the backfill material necessary to complete the work satisfactorily.

Payment will be made under:

C. Grout for Tieback Anchors

The quantity of Grout for Tieback Anchors, measured as provided above will be paid for at the contract unit price per cubic yard (cubic meter) for "Tieback Anchor Grout". Such price and payment will be considered full compensation for furnishing, mixing, placing submitting records of tests, all tools and all other miscellaneous items necessary to complete the work

Payment will be made under:

TENSIONED ROCK BOLTS

10-12-04

1.0 DESCRIPTION

Furnish, install and test 1-1/4 inch diameter, 10 ft. minimum long steel bar rock anchors at locations as determined by the Engineer. The installation frequency, location and length of Rock Bolts are to be determined by the Engineer during construction of the Toe Scour Protection. Conditions encountered may require the Engineer to change the frequency and length of Rock Bolts from those indicated by these Special Provisions.

The Contractor is cautioned to the fact that the location of Rock Bolts may require the Contractor to work from cranes or other specialized methods.

Unless otherwise specified herein, install anchors according to the anchor manufacturer procedures and recommendations or as directed by the Engineer.

2.0 SUBMITTALS

Supply the following information:

- A. Shop Drawings: Not less than 5 days prior to fabrication and include:
 - 1-1/4 inch diameter rock anchor design details, including bond length, method of corrosion protection for permanent anchors, the head assembly, and reinforced concrete reaction block complete with doweling and reinforcing details. Detail drawings including specific method and procedure for drilling, installing, grouting and testing rock anchors.
- B. <u>Calibration Certificates:</u> Not less than 5 days prior to commencing drilling and include:

Tensioning jack calibration certificate(s) of test which have been performed not more than 5 days prior to commencing drilling. Provide certificate showing the relationship between gauge pressure and applied load.

- C. <u>Product Data and Manufacturer's Instructions:</u> Not less than 5 days prior to commencing drilling and include:
 - 1. Pre-mixed, non-shrink anchoring grout type.
 - 2. Anti-corrosion compound for inside of anchor head.
 - 3. Mill test reported for each heat or lot of prestressing components used to fabricate the anchors showing ultimate load, yield, percent elongation at yield and modulus of elasticity.
- D. <u>Daily Records</u>: Within 5 days after completion of each anchor installation in each area. Submit records of each rock anchor on the Contractors anchor report form and test log. Include drilling conditions, bolt location, length, and grout volume.

3.0 MATERIALS

- A. 1-1/4 Inch Diameter Rock Anchors
 - 1. <u>General:</u> Use anchor assembly 1-1/4 inch diameter, 20 ft. long Grade 60 ksi deformed or continuously threaded steel bar conforming to ASTM 615 complete with corrosion protection system for permanent installations,

centralizers on 4 ft. centers in bond zone, couplings where required, grout tubes, and anchor head assembly consisting of reinforced concrete reaction block, anchor plate, hardened washers, nut, and steel cover. The anchor head assembly must be capable of developing 100 percent of the guaranteed minimum ultimate tensile strength of the bar without cracking or deformation. Do not exceed a bearing pressure on the reaction block concrete of 4000 psf.

- 2. <u>Manufacturer:</u> Use all prestressing components from the product of a manufacturer regularly engaged in the fabrication of permanent rock anchor systems. The fabrication procedure must be in strict accordance with the manufacturer details.
- 3. <u>Assembly:</u> Use anchor assembly consisting of a bond length to be determined by the Contractor, and a variable free stressing length to suit any changes to the hole lengths. The assembly must be accordance to the manufacturers approved details.
- 4. <u>Corrosion Protection:</u> Include a corrosion protection system for the permanent rock anchor to protect the full length of the bar. The corrosion protection system should comprise a continuous plastic sheath grouted on to the bar, or and approved equivalent system. Apply corrosion protection system to the bars prior to their installation in the drill holes. Protect anchor head and the exposed bar under the anchor plate against corrosion, including an arrangement for pumping an anti-corrosion compound under the reaction plate to form a continuous seal of the unprotected portion of the bar.

Paint the exposed anchor plate and bar with two coats of zinc-rich paint; the zinc-rich paint must meet the requirements of Article 1080-9 of the Standard Specifications.

B. Anchoring Grout

- 1. The grout must be a pre-mixed, unsanded, non-metallic, non-shrink grout, which can be mixed to a flowable consistency with a minimum 7-day compressive strength of 3000 psi. and a minimum 28 day compressive strength of 5500 psi. Cylinders will be made at such frequencies as determined by the Engineer and conduct testing in accordance to Section 1054-6 of the Standard Specifications.
- 2. Use pre-mixed grout from the product of a manufacturer regularly engaged in the manufacture of cementitious grouts for rock anchoring.

a. Water

Use water in Portland cement grouts that is clear, fresh water, free from injurious amounts of oil, acid, alkali, organic matter, sediment or any other deleterious substance.

b. Reinforced Concrete Reaction Blocks

Reinforced concrete reaction blocks, where required, to level or wedge the ground surface must be adequately reinforced to withstand the pressure of the reaction plate. All materials must meet the requirements for incidental concrete in Section 825 of the Standard Specifications.

3.0 CONSTRUCTION METHODS

A. General

Prior to installation, all anchor corrosion protection components and the anchor assembly must be handled and stored to avoid corrosion and damage such as abrasion, cuts, cracks, nicks, pits, welds or weld splatters. Furthermore, once the corrosion protection sheath has been grouted, use special handling procedures to prevent bending of the bar that could crack the grout in the sheath. Any such damage of the anchor components of the anchor assembly may be rejected as determined by the Engineer.

B. Installation Sequence

Sequence rock anchor installation and blasting operations such that no blasting is carried out within a distance of 200 feet from any bolt until the grout anchorage has set for a time not less than six days.

C. Site Preparation

Before drilling anchor holes, level all soil and loose and broken rock in the bearing area.

D. Drilling

1. General:

- a. Equipment: Drill holes with a rotary-percussion drill.
- b. <u>Drill Logs:</u> Driller must keep an accurate log noting depth from surface of any changes in rock hardness, rate of drilling, presence of water, fracture zones and voids.
- c. <u>Cleaning:</u> Clean holes thoroughly of all cuttings and rock fragments by flushing with high pressure air.
- d. <u>Sequence</u>: Drilling must precede reaction block construction.

2.

- a. <u>Dimensions:</u> Drill anchor holes a minimum diameter of 4 inch or as specified by the anchor manufacturer and 2 feet deeper than the anchor length.
- b. Orientation: Drill anchor holes no more than 30 degrees from vertical.
- c. <u>Deviation:</u> The anchor holes must not deviate by more than one foot from the specified location determined by the collar location and the required alignment of the anchor. The Engineer may require that drill hole orientation surveys be carried out, at the Contractors expense, where there is evidence of excessive deviation.

E. Water Test

- 1. <u>Test Procedure:</u> After cleaning the hole, fill drill hole with water, and the flow of water into the rock surrounding the hole must be observed for a period of 5 minutes.
- 2. <u>Acceptance Criteria:</u> The flow of water must not exceed 0.001 gals/inch diameter/foot depth/minute.
- 3. <u>Grout and Re-drill:</u> If the water flow exceeds the acceptance criteria, grout the hole with a cementitious sealing grout. Within 24 hours after grouting, re-drill and re-test the hole. Perform the grouting and re-drilling procedure until the hole has passed the acceptance criteria. Conduct procedure at the Contractors expense.

F. Anchor Insertion:

- 1. Following acceptance of a drill hole, install the rock anchor assembly comprising steel bar, corrosion protection, centralizers and grout tubes in the hole. Do not bend anchors during handling and anchor must slide freely into the hole without hammering or pushing.
- 2. The anchor head assembly must be firmly supported at its final location during grouting and for the curing period.

G. Grouting

1. <u>General</u>: Place grout only at the temperature range recommended by the grout manufacturer.

Do not use grout with an expired date in the work and dispose of at an authorized location.

Do not use grout that has any hardened lumps in the work and dispose of at an authorized location.

2. <u>Mixing:</u> Mix grout in a colloidal or high shear grout mixer in accordance with the grout manufacturers published instructions. Use only enough mixing water to produce a grout with the required consistency for the placing method proposed. Place grout immediately after mixing.

3. Placing Grout:

a. <u>General</u>: Place grout quickly and continuously to avoid overworking, segregation, bleeding and disturbance of initial set.

Do not use grout which has stiffened due to delay in the work and dispose of at an authorized location.

Do not re-temper grout after initial mixing.

b. Pump grout into the annular space between the rock and the anchor using a grout tube extending to the lower end of the drill hole to fill the hole to the collar.

H. Concrete Reaction Blocks

- 1. <u>General</u>: Construct a concrete reaction block or a suitable quick set mix approved by the Engineer at each anchor location, where the ground has inadequate bearing capacity to support the load under the reaction plate, or where the ground surface is irregular or is not aligned at right angles to the axis of the anchor. The reaction block must form a uniform bearing surface for the steel reaction plate such that the bearing plate is aligned at right angles to the anchor, with its center coincident with the axis of the bar assembly.
- 2. <u>Surface Preparation</u>: Prior to pouring concrete on the ground surface, level surface with air/water jets and stiff brooming.
- 3. <u>Anchor Block Construction</u>: The concrete reaction block or quick set mix must be sized and reinforced as necessary to provide a bearing surface that can sustain the applied stress under the reaction block without bending or cracking.

I. Testing

- 1. <u>Setting Time</u>: The grout in the bond zone and concrete in the reaction block must meet the strength specified by the anchor manufacturer prior to testing the anchors.
- 2. <u>Notification</u>: Notify the Engineer notification of testing 48 hours prior to commencing testing.

- 3. <u>Testing Equipment</u>: Supply all testing, measuring and ancillary equipment.
- 4. <u>Test Procedure</u>: Set up a stable system to support the dial gauge used to make absolute measurements of the deflection of the head of the anchor. The system must be acceptable to the Engineer who will record and process all load/deflection measurements.
- 5. <u>Hydraulic Jack</u>: Tension all anchors using a calibrated hydraulic jack as specified by the anchor manufacturer.
- 6. <u>Test Loads</u>: Tension the anchors to the following loads:

Alignment Load (AL) - 10 kips Test Load (1.25P) - 75 kips Transfer Load (P) - 60 kips

- 7. Performance Tests: Conduct performance tests on the first three (3) anchors in each Area, and up to thirty (30) other anchors in the project as selected by the Engineer. The Performance Test consists of a cyclic loading program according to the following procedure, with deflection of the head measured relative to a stable reference point to an accuracy of .001 inch at each load interval:
 - i. AL, 0.25P, AL,
 - ii. 0.25P, 0.5P, AL,
 - iii. 0.25P, 0.5P, 0.75P, AL,
 - iv. 0.25P, 0.5P, 0.75P, 1.0P, AL,
 - v. 0.25P, 0.5P, 0.75P, 1.0P, 1.25P
 - vi. Hold for Creep Test
 - vii. Lock off at 1.0P
- 8. <u>Proof Test</u>: Proof test all anchors not performance tested according to the following procedure, with deflection of the head measured relative to a stable reference point to an accuracy of 0.001 inch at each load interval:
 - i. AL, 0.25P, 0.5P, 0.75P, 1.0P, 1.25P,
 - ii. Hold for Creep Test,
 - iii. Lock off at 1.0P.
- 9. <u>Creep Test</u>: At the Test Load on each anchor, perform a creep test by holding the load constant and recording the deflection of the head at the following time intervals:
 - i. 0, 0.5, 2, 5, 10, 30, 50 minutes for Performance Test,
 - ii. 0, 0.5, 2, 5 minutes for Proof Test.

10. <u>Lift-off Test</u>: After locking off the anchor at the Transfer Load, re-apply the load to determine the lift-off load. The lift-off load is the load at which the head of the anchor just starts to move as the load is applied.

J. Acceptance Criteria

1. Criteria: Accept an anchor if the following criteria are met:

The total elastic movement at the anchor head must be more than 80% of the theoretical elastic elongation of the free stressing length, and less than 100% of the theoretical elastic elongation of the free stressing length plus 50% of the bond length.

The creep movement at the anchor head does not exceed 0.08 inch during the Creep Test.

The lift-off load is within 10% of the Transfer Load.

- 2. <u>Anchor Failure</u>: If any anchor fails to meet the acceptance criteria, the Contractor, at his expense, must perform all of the following:
 - a. Re-test the failed anchor using Performance Test procedures to as high a load as possible and determine the maximum load that will satisfy acceptance criteria I, II and III. Install an additional anchor in accordance with this specification at a location selected by the Engineer. The two anchors combined tension must not be less than 100 percent of the Test Load (P).
 - b. Submit any method for improving the capacity of the anchor and obtain the Engineers authorization to proceed.
 - c. For each failed anchor, test or re-test using Performance Test procedures, one additional anchor as selected by the Engineer.

5.0 METHOD OF MEASUREMENT

The quantity of 1½ inch diameter rock bolts to be paid for will be measured by the linear feet from the lower end of the bar to the upper surface of the anchor plate to the nearest foot.

6.0 BASIS OF PAYMENT

The quantity of Tensioned Rock Bolts, measured as provided above will be paid for at the contract unit price per linear foot for Tensioned Rock Bolts.

Such price and payment will be considered full compensation for all work covered by this provision including but not limited to furnishing all materials, drilling, tensioning, testing, alignment measurements, grouting/redrilling as required, anchor grouting, and meeting all acceptance criteria of the anchors, as well as construction of the reaction blocks and removal of all formwork.

Payment will be made under:	
Tensioned Rock Bolt	Linear Feet

DEPARTMENT FURNISHED PORTABLE CONCRETE BARRIER

10-13-04

DESCRIPTION.

Obtain, maintain, and return Department Furnished Portable Concrete Barrier (PCB) in accordance with the plans and specifications.

CONSTRUCTION METHODS.

Transport the Portable Concrete Barrier to the project.

METHOD OF MEASUREMENT.

The quantity of Department Furnished Portable Concrete Barrier to be paid for will be the actual number of linear feet of barrier which has been obtained, installed, maintained, relocated, and returned to the Department.

BASIS OF PAYMENT.

The quantity of Department Furnished Portable Concrete Barrier, measured as provided above, will be paid for at the contract unit price for each "Department Furnished Portable Concrete Barrier".

Payment will be made under:

Pay Unit Pay Item

Department Furnished Portable Concrete Barrier Linear Foot

POLYUREA PAVEMENT MARKING MATERIAL HIGHLY RETROREFLECTIVE ELEMENTS

10-13-04

Section 1205-1 DESCRIPTION:

This special provision covers machine applied "Highly Retroreflective" Polyurea pavement marking material with reflective elements. All remaining Articles in Section 1205 shall be as described in the 2002 Standard Specifications for Roads and Structures with the exceptions below.

Section 1205-2 Materials

(A) General

Replace Article (A) with the following:

Use Section 1087-Articles 1, 3, 5 & 6 (General, Color, Packaging for Shipment, and Storage Life) as described in the 2002 Standard Specifications for Roads and Structures. The manufacturer may recommend any remaining information necessary for the placement of "Highly Retroreflective" Polyurea pavement markings.

(B) Material Qualification

Replace Article (B) with the following:

Use only "Highly Retroreflective" polyurea pavement markings that have been pre-approved by the Traffic Control Section prior to application. Use retroreflecting elements according to the manufacturer's recommendations in order to meet the retroreflectivity requirements as stated in Section 1205-3(G)(8) as measured by a LTL 2000, LTL-X or Department approved 30m mobile retroreflectometer.

Furnish a Type 3 Material Certification and Type 4 Material Certification in accordance with Article 106-3 as described in the 2002 Standard Specifications for Roads and Structures.

For more information, contact the Traffic Control Section at 919 250-4151.

Section 1205-3 Construction Methods

Section 1205-3(B) (1) General for all Application Equipment: Add the following sentence after the last paragraph:

Do not use handliners or any other non-truck mounted pavement marking machine to install "Highly Retroreflective" polyurea pavement markings on long-line applications.

Add the following Section immediately following Section 1205-3(G)(8)

Section 1205-3 (G) (9) "Highly Retroreflective" Polyurea Application:

Produce "Highly Retroreflective" Polyurea pavement marking lines which have a minimum dry thickness of 20 mils (0.50mm) when placed on concrete and asphalt pavements.

Using the Polyurea application equipment, apply the pavement marking materials simultaneously. Apply the Polyurea resin, mixed at the proper ratio according to the manufacturer recommendations, to the pavement surfaces within the proper application temperatures as determined by the material manufacturer. Inject reflective elements into the molten (liquid) Polyurea pavement markings.

Apply reflective elements according to manufacturer's recommendation to immediately produce a highly reflective marking. At the time of installation, provide in-place marking with the minimum reflectance values shown below, as obtained with a LTL 2000, LTL-X or Department approved 30m mobile retroreflectometer. Maintain the retroreflectance values shown below for a minimum of 30 days from the time of placement of marking material.

WHITE: 800 mcd/lux/m2 YELLOW: 500 mcd/lux/m2

Produce marking, which upon cooling, is uniformly reflectorized and has the ability to resist deformation caused by traffic throughout its entire length.

The manufacturer of the Polyurea pavement marking material shall certify the Contractor to place the material. Provide at least one member of each crew that completed this training. Furnish the Engineer written confirmation of this training from the material manufacturer prior to the beginning of work. The manufacturer's technical representative shall be onsite during the entire installation of product.

Provide a manufacturer's technical representative that is knowledgeable and familiar with the Contractors application equipment prior to the installation of the Polyurea pavement markings.

Section 1205-3(H)(1) Observation Period for "Highly Retroreflective" Polyurea Pavement Markings:

Replace the first paragraph with the following:

Thermoplastic, epoxy, and polyurea pavement markings are subject to a 180 day observation period.

Add the following just before the last paragraph:

Provide high visibility polyurea pavement marking materials that maintain minimum retroreflectance values throughout the observation period as follows:

WHITE: 700 mcd/lux/m2

YELLOW: 400 mcd/lux/m2

In addition to the 180 day observation period, provide high visibility polyurea pavement marking materials that meet the following minimum retroreflectance values after having been snowplowed:

WHITE: 375 mcd/lux/m2

YELLOW: 250 mcd/lux/m2

These measurements will be taken within 30 days prior to the end of the Observation Period. The reflectance values will be taken using a LTL 2000, LTL-X or Department approved 30m mobile retroreflectometer.

Section 1205-3(I) Removal of Pavement Markings:

Add the following just before the last paragraph:

Do not apply Polyurea pavement marking over existing pavement marking materials having less adherence than the Polyurea. Remove existing lines according to the manufacturer's recommendations.

Measurement and Payment:

Measurement and payment shall be in accordance with Section 1205 of the *North Carolina Standard Specifications for Roads and Structures*.

January 1, 2002

STANDARD SPECIAL PROVISION

AVAILABILITY OF FUNDS - TERMINATION OF CONTRACTS

In accordance with G.S. 143.18.1 (6), Subsection (5) of G.S. 143-28.1 is hereby incorporated verbatim in this contract. G.S. 143-28.1(5) is as follows:

"(5). Amounts Obligated - Payments subject to the Availability of Funds - Termination of Contracts. Highway maintenance and construction appropriations may be obligated in the amount of allotments made to the Department of Transportation by the Office of State Budget and Management for the estimated payments for maintenance and construction contract work to be performed in the appropriation fiscal year. The allotments shall be multi-year allotments and shall be based on estimated revenues and shall be subject to the maximum contract authority contained in subdivision (2) above. Payment for highway maintenance and construction work performed pursuant to contract in any fiscal year other than the current fiscal year will be subject to appropriations by the General Assembly. Highway maintenance and construction contracts shall contain a schedule of estimated completion progress and any acceleration of this progress shall be subject to the approval of the Department of Transportation provided funds are available. The State reserves the right to terminate or suspend any highway maintenance or construction contract and any highway maintenance or construction contract shall be so terminated or suspended if funds will not be available for payment of the work to be performed during that fiscal year pursuant to the contract. In the event of termination of any contract, the contractor shall be given a written notice of termination at least 60 days before completion of schedule work for which funds are available. In the event of termination, the contractor shall be paid for the work already performed in accordance with the contract specifications".

Payment will be made on any contract terminated pursuant to the special provision in accordance with Article 108-13, Item 5, of the North Carolina Department of Transportation Standard Specifications for Roads and Structures, dated January 1, 2002.

STANDARD SPECIAL PROVISIONS (ENGLISH AND METRIC) NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY

Seed shall be sampled and tested by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory. When said samples are collected, the vendor shall supply an independent laboratory report for each lot to be tested. Results from seed so sampled shall be final. Seed not meeting the specifications shall be rejected by the Department of Transportation and shall not be delivered to North Carolina Department of Transportation warehouses. If seed has been delivered it shall be available for pickup and replacement at the supplier's expense.

Any relabeling required by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory, that would cause the label to reflect as otherwise specified herein shall be rejected by the North Carolina Department of Transportation.

Seed shall be free from seeds of the noxious weeds Johnsongrass, Balloonvine, Jimsonweed, Witchweed, Itchgrass, Serrated Tussock, Showy Crotalaria, Smooth Crotalaria, Sicklepod, Sandbur, Wild Onion, and Wild Garlic. Seed shall not be labeled with the above weed species on the seed analysis label. Tolerances as applied by the Association of Official Seed Analysts will NOT be allowed for the above noxious weeds except for Wild Onion and Wild Garlic.

Tolerances established by the Association of Official Seed Analysts will generally be recognized. However, for the purpose of figuring pure live seed, the <u>found</u> pure seed and <u>found</u> germination percentages as reported by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory will be used. Allowances, as established by the NCDOT, will be recognized for minimum pure live seed as listed on the following pages.

The specifications for restricted noxious weed seed refers to the number per pound as follows:

Restricted Noxious Weed	Limitations per Lb. Of Seed	Restricted Noxious Weed	Limitations per Lb. of Seed
Blessed Thistle	4 seeds	Bermudagrass	27 seeds
Cocklebur	4 seeds	Cornflower (Ragged Robin)	27 seeds
Spurred Anoda	4 seeds	Texas Panicum	27 seeds
Velvetleaf	4 seeds	Bracted Plantain	54 seeds
Morning-glory	8 seeds	Buckhorn Plantain	54 seeds
Corn Cockle	10 seeds	Broadleaf Dock	54 seeds
Wild Radish	12 seeds	Curly Dock	54 seeds
Purple Nutsedge	27 seeds	Dodder	54 seeds
Yellow Nutsedge	27 seeds	Giant Foxtail	54 seeds
Canada Thistle	27 seeds	Horsenettle	54 seeds
Field Bindweed	27 seeds	Quackgrass	54 seeds

Hedge Bindweed 27 seeds Wild Mustard 54 seeds

Seed of Pensacola Bahiagrass shall not contain more than 7% inert matter, Kentucky Bluegrass and Fine or Hard Fescue shall not contain more than 5% inert matter whereas a maximum of 2% inert matter will be allowed on all other kinds of seed. In addition, all seed shall not contain more than 2% other crop seed nor more than 1% total weed seed. The germination rate as tested by the North Carolina Department of Agriculture shall not fall below 70%, which includes both dormant and hard seed. Seed shall be labeled with not more than 7%, 5% or 2% inert matter (according to above specifications), 2% other crop seed and 1% total weed seed.

Exceptions may be made for minimum pure live seed allowances when cases of seed variety shortages are verified. Pure live seed percentages will be applied in a verified shortage situation. Those purchase orders of deficient seed lots will be credited with the percentage that the seed is deficient.

Further specifications for each seed group are give below:

Minimum 85% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 83% pure live seed will not be approved.

Sericea Lespedeza Oats (seeds)

Minimum 80% pure live seed; maximum 1% total weed seed; maximum 2% total other crop; maximum 144 restricted noxious weed seed per pound. Seed less than 78% pure live seed will not be approved.

Tall Fescue (all approved varieties)

Kobe Lespedeza

Bermudagrass

Browntop Millet

Korean Lespedeza German Millet - Strain R

Weeping Lovegrass Centipedegrass

Carpetgrass Clover - Red/White/Crimson

Minimum 78% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 76% pure live seed will not be approved.

Common or Sweet Sundangrass

Minimum 76% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 74% pure live seed will not be approved.

4

Rye (grain; all varieties) Kentucky Bluegrass (all approved varieties) Hard Fescue (all approved varieties) Shrub (bicolor) Lespedeza

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 70% pure live seed will not be approved.

Crownvetch Pensacola Bahiagrass Japanese Millet Switchgrass Reed Canary Grass

STANDARD SPECIAL PROVISIONS ERRATA

Correct the 2002 Standard Specifications as follows:

Page 1-61, Subarticle 108-10(A)

In the first sentence, change the Article reference from 101-24 to 101-25.

Page 2-21, Subarticle 235-4(B)

In the third sub-bullet under the eighth bullet in this subarticle, delete the word "subgrade" and insert the words "finished grade".

Page 3-4, Article 300-10

Change all references to 300-8 to 300-9.

Page 5-9, Subarticle 520-3(A)

Delete the words "at your option".

Page 5-10, Subarticle 520-6(A)

In the first sentence, add a period after "(B)" and delete the words "and (C)."

Delete the last sentence of the subarticle.

Page 8-47, Subarticle 862-6

Change the subarticle number from 862-6 to 862-7.

Page 8-49, Subarticle 864-4

In the first paragraph, change the Article reference from 862-3 to 864-3.

Page 8-55, Subarticle 866-5(G)

In the third pay item, insert the words "with Posts" after the word "Fence".

Page 10-1, Subarticle 1000-3(A)

In the second paragraph, change 550 psi to 600 psi (4.1 MPa).

Page 10-2, Subarticle 1000-3(A)

In the last sentence of the second paragraph on this page, change 550 psi to 600 psi (4.1 MPa).

Page 10-5, Table 1000-1

Under the column "Consistency Max. Slump" change the sub-heading 'Non-Vibrated' to 'Vibrated' and change the sub-heading 'Vibrated' to 'Non-Vibrated'. Under the column "Min. Cement Content" change the sub-heading 'Non-Vibrated' to 'Vibrated' and change the sub-heading 'Vibrated' to 'Non-Vibrated'.

Page 10-7, Table 1005-2

For Std. Size # 2S make the following changes:

- #50 (0.300) Sieve change the limits from 8 30 to 5 30.
- #100 (0.150) Sieve change the limits from 0.5 10 to **0 10**.

For Std. Size # 2MS make the following changes:

- #50 (0.300) Sieve change the limits from 8 35 to 5 35.
- #100 (0.150) Sieve change the limits from 0.5 20 to **0 20**.

Page 15-3, Article 1505-3

In the last paragraph of this article, change Article 300-6 to Article 300-7.

Page 15-10, Article 1510-5

In the fourth paragraph, insert a comma after the word "water".

Page 15-18, Article 1530-2

In the third paragraph on the page, change "Section 812" to "Section 340".

Page 16-15, Article 1635-3(A)

Substitute the second paragraph with the following:

Construct the rock pipe inlet sediment trap type-A with a minimum height of 18 inches (457.2 mm) and a minimum of 12 inches (304.8 mm) below the roadway shoulder or diversion point.



STANDARD SPECIAL PROVISION AWARD OF CONTRACT

"The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Department of Transportation (49 C.F.R., Part 21), issued pursuant to such act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin".

MINORITY AND FEMALE EMPLOYMENT REQUIREMENTS

NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE NUMBER 11246)

1. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, see as shown on the attached sheet entitled "Employment Goals for Minority and Female participation".

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its effort to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project or the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

2. As used in this Notice and in the contract resulting from this solicitation, the "covered area" is the county or counties shown on the cover sheet of the proposal form and contract.

EMPLOYMENT GOALS FOR MINORITY AND FEMALE PARTICIPATION

Economic Areas

Area 023 29.7%	Area 026 33.5%	Area 029 15.7%
Bertie County	Bladen County	Alexander County
Camden County	Hoke County	Anson County
Chowan County	Richmond County	Burke County
Gates County	Robeson County	Cabarrus County
Hertford County	Sampson County	Caldwell County
Pasquotank County	Scotland County	Catawba County
Perquimans County		Cleveland County
-	Area 027 24.7%	Iredell County
Area 024 31.7%		Lincoln County
	Chatham County	Polk County
Beaufort County	Franklin County	Rowan County
Carteret County	Granville County	Rutherford County
Craven County	Harnett County	Stanly County
Dare County	Johnston County	
Edgecombe County	Lee County	Area 0480 8.5%
Green County	Person County	
Halifax County	Vance County	Buncombe County
Hyde County	Warren County	Madison County
Jones County		
Lenoir County	Area 028 15.5%	Area 030 6.3%
Martin County		
Nash County	Alleghany County	Avery County
Northampton County	Ashe County	Cherokee County
Pamlico County	Caswell County	Clay County
Pitt County	Davie County	Graham County
Tyrrell County	Montgomery County	Haywood County
Washington County	Moore County	Henderson County
Wayne County	Rockingham County	Jackson County
Wilson County	Surry County	McDowell County
	Watauga County	Macon County
Area 025 23.5%	Wilkes County	Mitchell County
		Swain County
Columbus County		Transylvania County
Duplin County		Yancey County
Onslow County		
Danidan Carretia		

Pender County

SMSA Areas

Area 5720 26.6%	Area 6640 22.8%	Area 3120 16.4%
Currituck County	Durham County	Davidson County
	Orange County	Forsyth County
Area 9200 20.7%	Wake County	Guiford County
		Randolph County
Brunswick County	Area 1300 16.2%	Stokes County
New Hanover County		Yadkin County
2.0	Alamance County	•
		Area 1520 18.3%
Area 2560 24.2%		
		Gaston County
Cumberland County		Mecklenburg County
,		Union County

Goals For Female

Participation in Each Trade

(Statewide) 6.9%

FHWA-1273 Electronic version -- March 10, 1994

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Payment of Predetermined Minimum Wage
- V. Statements and Payrolls
- VI. Record of Materials, Supplies, and Labor
- VII. Subletting or Assigning the Contract
- VIII. Safety: Accident Prevention
- IX. False Statements Concerning Highway Projects
- X. Implementation of Clean Air Act and Federal Water Pollution Control Act
- XI. Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion
- XII. Certification Regarding Use of Contract Funds for Lobbying

I. GENERAL

- 1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
- 2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.
- 3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.
- 4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2; Section IV, paragraphs 1, 2, 3, 4, and 7; Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general dispute clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

- 6. **Selection of Labor:** During the performance of this contract, the contractor shall not:
- a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
- b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

- 1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:
- a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.
- b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

- 3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:
- a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's
- EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
- b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
- c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.
- d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
- e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.
- 4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.
- a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.
- b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementations of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

- c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.
- 5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:
- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

- a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.
- b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.
- c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
- d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

- 7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:
- a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.
- b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
- c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.
- d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.
- 8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.
- a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.
- b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

- c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.
- 9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.
- a. The records kept by the contractor shall document the following:
- (1) The number of minority and non-minority group members and women employed in each work classification on the project;
- (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;
- (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and
- (4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.
- b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the

job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

- a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.
- b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or

disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

- a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.
- b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.
- c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

- a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.
- b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:
- (1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;
- (2) the additional classification is utilized in the area by the construction industry;
- (3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and
- (4) with respect to helpers, when such a classification prevails in the area in which the work is performed.
- c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary
- e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

- a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.
- b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

- (1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.
- (2) The allowable ratio of apprentices to journeymanlevel employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.
- (3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour

Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

- (1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.
- (2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.
- (3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.
- (4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference

2. Payrolls and Payroll Records:

- a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and quards working at the site of the work.
- b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

- c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.
- d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;
- (2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;
- (3) that each laborer or mechanic has been paid not less that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.
- e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.
- f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.
- g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

- 1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:
- a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.
- b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.
- c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.
- At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

- 1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).
- a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.
- b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.
- 2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

- 3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.
- 4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

- 1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.
- 2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).
- 3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each

Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more that \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

- 1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.
- 2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

- 3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.
- 4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION.

INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.
- d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from

participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

- g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.
- i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

- 1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- 2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

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- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

- 1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS

FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- 2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
- 3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

Superseded General Decision No. NC020010

State: North Carolina

Construction Type:

HIGHWAY

County(ies):

GRANVILLE ALLEGHANY PASQUOTANK ANSON GREENE PENDER ASHE HALIFAX PERQUIMANS AVERY HARNETT PERSON BEAUFORT HAYWOOD PITT BERTIE HENDERSON POLK BLADEN HERTFORD RICHMOND BRUNSWICK HOKE ROBESON HYDE CALDWELL ROCKINGHAM IREDELL CAMDEN RUTHERFORD CARTERET **JACKSON** SAMPSON JOHNSTON CASWELL SCOTLAND CHATHAM JONES STANLY CHEROKEE LEE SURRY CHOWAN LENOIR SWAIN MACON CLAY TRANSYLVANIA CLEVELAND MADISON TYRRELL VANCE COLUMBUS MARTIN CRAVEN MCDOWELL WARREN CURRITUCK MITCHELL WASHINGTON DARE MONTGOMERY WATAUGA DUPLIN MOORE WAYNE EDGECOMBE NASH WILKES GATES NORTHAMPTON WILSON GRAHAM PAMLICO YANCEY

HIGHWAY CONSTRUCTION PROJECTS (does not include Tunnels, Building Structures in rest area projects, Railroad Construction, and Bascule/Suspension/Spandrel Arch Bridges, Bridges designed for Commercial Navigation, and Bridges involving marine construction and other major bridges).

Modification Number Publication Date 0 06/13/2003

COUNTY(ies):

ALLEGHANY GRANVILLE PASQUOTANK ANSON GREENE PENDER ASHE **HALIFAX** PERQUIMANS **AVERY** HARNETT PERSON HAYWOOD PTTT BEAUFORT HENDERSON BERTIE POLK BLADEN HERTFORD RICHMOND BRUNSWICK HOKE ROBESON HYDE CALDWELL ROCKINGHAM CAMDEN IREDELL RUTHERFORD CARTERET **JACKSON** SAMPSON CASWELL JOHNSTON SCOTLAND CHATHAM JONES STANLY

CHEROKEE	LEE	SURRY 23	
CHOWAN	LENOIR	SWAIN	
CLAY	MACON	TRANSYLVANIA	
CLEVELAND	MADISON	TYRRELL	
COLUMBUS	MARTIN	VANCE	
CRAVEN	MCDOWELL	WARREN	
CURRITUCK	MITCHELL	WASHINGTON	
DARE	MONTGOMERY	WATAUGA	
DUPLIN	MOORE	WAYNE	
EDGECOMBE	NASH	WILKES	
GATES	NORTHAMPTON	WILSON	
GRAHAM	PAMLICO	YANCEY	
GRAHAM	TAMICO	IAWCEI	
SUNC3001A 02/12/2	1990		
SUNCSUUIA 02/12/		Rates	Fringes
CARPENTER		7.71	2 2 2 2 3 0 5
CARPENIER		7.71	
CONCRETE FINISHER		7.64	
CONCRETE FINISHER		7.04	
TRONWORKER (Boinfor	raina)	9.27	
IRONWORKER (Reinfor	(Cing)	9.27	
T 3 D 0 D E D			
LABORER		5.42	
Comman		6.32	
Asphalt Raker			
Form Setter (Road)		6.90	
Mason (Brick, Bloom	ck, Stone)	7.76	
Pipe Layer		5.90 6.53	
Power Tool Operato	or	6.53	
DOLLER HOLLT DISTRICT OR	an a mon a		
POWER EQUIPMENT OP		6.57	
Asphalt Distribute	or		
Asphalt Paver		7.00	
Bulldozer	-1	7.21	
Bulldozer (utility		6.00	
Concrete Finishing	g Machine	9.48	
Concrete Grinder	7	8.13	
Crane, Backhoe, Sh		0 53	
& Dragline (Over 1	ı ya.)	8.53	
G	1		
Crane, Backhoe, Sh		6 01	
& Dragline (1 yd.	& under)	6.91	
Drill Operator		7.65	
Grade Checker		5,15	
Greaseman		6.43	
Hydroseeder		7.00	
Loader		6.85	
Mechanic		8.27	
Milling Machine	- G \	8.00	
Motor Grader (Fine		8.01	
Motor Grader (Roug	gn Grade)	7.42	
Oiler		5.80	
Piledriver		11.00	
Roller (Finish)		6.32	
Roller (Rough)		5.43	
Scraper		6.41	
Screed Asphalt		6.33	
Stone Spreader	•	5.88	
Stripping Machine	Operator	6.00	
Subgrade Machine		9.00	
Sweeper		5.64	

Tractor (utility)	6.15	
TRUCK DRIVERS:		
Single Rear Axle Trucks	5.15	
Multi Rear Axle Trucks	5.48	
Heavy Duty trucks	5.50	
Welder	9.07	

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

- 1.) Has there been an initial decision in the matter? This can be:
- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator U.S. Department of Labor 200 Constitution Avenue, N. W. Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board U. S. Department of Labor 200 Constitution Avenue, N. W. Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final. END OF GENERAL DECISION

Oct 14, 2004 12:12 pm

County: Haywood

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
-			ROADWAY ITEMS			
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
				·	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
0002	0043000000-N	226	GRADING	Lump Sum	L.S.	
0003	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUB- BING	1 ACR		
0004	0220000000-E	SP	ROCK EMBANKMENT	14,000 TON		
0005	0241000000-E	SP	GENERIC GRADING ITEM RING NETS	12,000 SY		
 0006	0255000000-E	SP	GENERIC GRADING ITEM SELECT MATERIAL, CLASS VI (TOE SCOUR PROTECTION)	1,500 TON		
0007	0257000000-E	SP	GENERIC GRADING ITEM TENSIONED ROCK BOLTS	2,000 LF		
8000	0318000000-E	300	FOUNDATION CONDITIONING MATE- RIAL, MINOR STRS	65 TON		
0009	0684000000-E	310	**" BIT COAT CS PIPE CULVERTS, TYPE B *****" THICK (24", 0.138")	84 LF		
0010	0684000000-E	310	**" BIT COAT CS PIPE CULVERTS, TYPE B *****" THICK (36", 0.168")	60 LF		
0011	0684000000-E	310	**" BIT COAT CS PIPE CULVERTS, TYPE B *****" THICK (48", 0.168")	56 LF		
0012	0714000000-E	310	18" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK	368 LF		
0013	0720000000-E	310	24" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK	40 LF		
0014	0995000000-E	340	PIPE REMOVAL	105 LF		·····
0015	0996000000-N	350	PIPE CLEAN-OUT	9 EA		
0016	1297000000-E	607	MILLING ASPHALT PAVEMENT, ***" DEPTH (2")	1,330 SY		
0017	1330000000-E	607	INCIDENTAL MILLING	133 SY		

County: Haywood

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0018	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	2,200 TON		
0019	1508000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0D	435 TON		
0020	1550000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S12.5D	713 TON		
0021	1560000000-E	620	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	95 TON		
0022	1565000000-E	620	ASPHALT BINDER FOR PLANT MIX, GRADE PG 70-22	21 TON		
0023	1570000000-E	620	ASPHALT BINDER FOR PLANT MIX, GRADE PG 76-22	35 TON		
0024	1840000000-E	665	MILLED RUMBLE STRIPS	1,175 LF		
0025	1891000000-E	SP	GENERIC PAVING ITEM UNREINFORCED CONCRETE	165 SY		
0026	2253000000-E	840	PIPE COLLARS	1 CY		·
0027	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	12 EA		
0028	2297000000-E	840	MASONRY DRAINAGE STRUCTURES	19 CY		
0029	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	4 LF		
0030	2396000000-N	840	FRAME WITH COVER, STD 840.54	6 EA		
0031	2407000000-N	840	STEEL FRAME WITH TWO GRATES, STD 840.37	6 EA		
0032	2556000000-E	846	SHOULDER BERM GUTTER	75 LF		
0033	2724000000-Е	857	PRECAST REINFORCED CONCRETE BARRIER, SINGLE FACED	725 LF		
0034	303000000-E	862	STEEL BM GUARDRAIL	75 LF		
0035	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	5 EA		

ITEMIZED PROPOSAL FOR CONTRACT NO. C201320

Oct 14, 2004 12:12 pm County: Haywood

		#	Description	Quantity	Unit Cost	Amoun
0036	3270000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE	1		
			350	EA		
 0037	3317000000-N	862	GUARDRAIL ANCHOR UNITS, TYPE	3		
			B-77	EA		
 0038	3360000000-E	863	REMOVE EXISTING GUARDRAIL	400		
				LF		
0039	3642000000-Е	876	PLAIN RIP RAP, CLASS A	3,000 TON		
				TON 		
0040	364900000-E	876	PLAIN RIP RAP, CLASS B	5 TON		
	3656000000-E	976	FILTER FABRIC FOR DRAINAGE	5,500		
JU4 1	303000000-Е	070	TIETER TABRIOT ON BIVAINAGE	SY		
 0042	440000000-E	1110	WORK ZONE SIGNS (STATIONARY)	100		
				SF		
0043	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	100		
				SF 		
0044	4415000000-N	1115	FLASHING ARROW PANELS, TYPE C	2 EA		
		4400	CHANCEARLE MESSAGE SIGNS			
0045	4420000000-N	1120	CHANGEABLE MESSAGE SIGNS	2 EA		
 0046	4430000000-N	1130	DRUMS	 325	·	
				EA		
0047	4460000000-N	1155	WARNING LIGHTS (TYPE B)	6		
				EA 		
0048	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	2 EA		
	4475000000 N	4405	TRUCK MOUNTED IMPACT ATTENUA-			
0049	4475000000-N	1100	TOR (45 MPH)	1 EA		
			TDUOK MOUNTED INDACT ATTENUA			
0050	448000000-N	1165	TRUCK MOUNTED IMPACT ATTENUA- TOR (60 MPH)	1 EA		
0051	4490000000-E	1170	PORTABLE CONCRETE BARRIER (ANCHORED)	400		
			(ANCHORED)	LF		
0052	4590000000-E	SP	GENERIC TRAFFIC CONTROL ITEM	400		
			PORTABLE CONCRETE BARRIER (DEPARTMENT FURNISHED)	LF		
			·	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
0053	4590000000-E	SP	GENERIC TRAFFIC CONTROL ITEM REMOVE & STOCKPILE PORTABLE	3,700		
			CONCRETE BARRIER	LF		

Oct 14, 2004 12:12 pm

County: Haywood

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amoun
0054	4815000000-E	1205	PAINT PAVEMENT MARKING LINES (6")	9,500 LF		
0055	4847100000-E	SP	POLYUREA PAVEMENT MARKING LINES (6")	10,000 LF		
 0056	4855000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (6")	14,000 LF		
 0057	4905000000-N	1253	SNOWPLOWABLE PAVEMENT MARKERS	25 EA		
0058	496000000-N	SP	GENERIC TRAFFIC CONTROL ITEM REPLACE LENSES IN MARKERS	45 EA		
 0059 	8990000000-N	SP	CONTRACT TIME	7,000 DOL		
			******* BEGIN SCHEDULE AA ******* (2 ALTERNATES)	******		
0060 AA 1	3980000000-Е	SP	GENERIC WALL ITEM GROUT FOR TIEBACK ANCHORS FOR WALL @ SLIDE 1	100 CY		
0061 AA 1	3984000000-E	SP	GENERIC WALL ITEM PERM ANCHOR TIEBACK WALL @ SLIDE 1	3,200 SF		
			*** OR ***			
0062 AA2	3982000000-N	SP	GENERIC WALL ITEM ALTERNATE RETENTION SYSTEM @ SLIDE 1	Lump Sum	L.S.	
			***** END SCHEDULE AA *			
			******** BEGIN SCHEDULE AB ******** (2 ALTERNATES)	*****		
0063 AB1	3980000000-E	SP	GENERIC WALL ITEM GROUT FOR TIEBACK ANCHORS FOR WALL @ SLIDE 2	250 CY		
 0064 AB1	3984000000-E	SP	GENERIC WALL ITEM PERM ANCHOR TIEBACK WALL @ SLIDE 2	11,000 SF		
0065 AB1	3988000000-E	SP	GENERIC WALL ITEM SELECT MATERIAL, CLASS VI (WALL @ SLIDE 2)	2,000 TON		
			*** OR ***			

Oct 14, 2004 12:12 pm

ITEMIZED PROPOSAL FOR CONTRACT NO. C201320

Page 5 of 5

County: Haywood

Unit Cost Quantity Description **Amount** Line Item Number Sec #

0066 3982000000-N

AB2

SP

GENERIC WALL ITEM ALTERNATE RETENTION SYSTEM @

SLIDE 2

Lump Sum

L.S.

***** END SCHEDULE AB *****

1212/Oct14/Q108590.0/D183636200000/E66

Total Amount Of Bid For Entire Project:

*AWARD LIMITS ON MULTIPLE PROJECTS

(Contract Number)	(County)
(Contract Number)	(County)
s agreed that in the event that I am (we are ue of which is more that the above stipulate	of work awarded to him in this letting, he shall state econd line of this form. If the low Bidder(s) on indicated projects, the total award limits, the Board of Transportation will icated which have a total value not exceeding the

^{**}Only those persons authorized to sign bids under the provisions of Article 102-8, Item 7, shall be authorized to sign this form.

C201320 HAYWOOD

	LISTING	LISTING OF DBE SUBCONTRACTORS	TRACTORS	
				Sheet of
FIRM NAME AND ADDRESS	ITEM NO.	ITEM DESCRIPTION	(*) AGREED UPON UNIT PRICE	DOLLAR VOLUME OF SUBLET ITEM
CONTRACT NO.	00	COUNTY	FIRM	

THIS FORM MUST BE COMPLETED IN ORDER FOR THE BID TO BE CONSIDERED RESPONSIVE AND BE PUBLICLY READ. BIDDERS WITH NO DBE PARTICIPATION MUST SO INDICATE THIS ON THE FORM BY ENTERING THE WORD OR NUMBER ZERO.

C201320 HAYWOOD

	LISTING	LISTING OF DBE SUBCONTRACTORS	NTRACTORS	
				Sheet of
FIRM NAME AND ADDRESS	ITEM NO.	ITEM DESCRIPTION	(*) AGREED UPON UNIT PRICE	DOLLAR VOLUME OF SUBLET ITEM
CONTRACT NO.	00	COUNTY	FIRM	

C201320 HAYWOOD

	LISTING	NG OF DBE SUBCONTRACTORS	VTRACTORS	Sheet of
FIRM NAME AND ADDRESS	ITEM NO.	ITEM DESCRIPTION	(*) AGREED UPON UNIT PRICE	DOLLAR VOLUME OF SUBLET ITEM
			-	
	-			
CONTRACT NO.	00	COUNTY	FIRM	

	LISTING	LISTING OF DBE SUBCONTRACTORS	VTRACTORS	
				Sheet of
FIRM NAME AND ADDRESS	ITEM NO.	ITEM DESCRIPTION	(*) AGREED UPON UNIT PRICE	DOLLAR VOLUME OF SUBLET ITEM
CONTRACT NO.	100 100	COUNTY	FIRM	

(*) The Dollar Volume Shown In This Column Shall be Actual Price Agreed Upon by the Prime Contractor and the DBE Subcontractor, and These Prices Will Be Used to Determine The Percentage of the DBE Participation in this Contract.

**MUST HAVE ENTRY EVEN IF FIGURE TO BE ENTERED IS ZERO.

**Dollar Volume of DBE Subcontractor......\$

Percentage of Total Contract bid Price

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

CICALATTIDE OF COAPTS ACTOD

	ation uses this sheet)
(Print full 1	name of corporation)
(Addres	s as Prequalified)
Attest	Ву
(Secretary) (Assistant Secretary) Delete inappropriate title	By(President) (Vice President) (Asst. Vice President) Delete inappropriate title
Print Signer's Name	Print Signer's Name
<u>NOTE - AFFIDAV</u>	CORPORATE SEAL TT MUST BE NOTARIZED
Subscribed and sworn to before me this the	
day of, 20	
(Signature of Notary Public)	NOTARY SEAL:
ofCounty.	
State of	
My Commission Expires:	
Signature Sheet 1 (Bid) - Corporation	

12/21/99

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT, AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR (If a joint venture, use this sheet)

Instructions to Bidders: On Line (1), print the name of each contractor. On Line (2), print the name of one of the joint venturers and execute below in the appropriate manner and furnish in the following lines all information required by Article 102-8 of the Specifications. On Line (3), print the name of the other joint venturer and execute below in the appropriate manner and furnish all information required by said article of the Specifications. For correct form of execution and information required for execution of this sheet by an individual, see Signature Sheets 3 and 4; for a corporation, see Signature Sheet 1; and for a partnership, see Signature Sheet 5.

(1)	8	nd
· /	A	Joint Venture
(2)		(Seal)
\	(Nan	(Seal) ne of Contractor)

		By
Wi	tness or Attest	
D: . (7:	Print Signer's Name
Print	Signer's Name	If a corporation, affix corporate seal:
and (3)		(Seal)
(")	(Nan	(Seal) ne of Contractor)
	(Add	ress as Prequalified)
XX.7.	ness or Attest	
Witi	ness or Allest	
Print 9	Signer's Name	Print Signer's Name
		If a corporation, affix corporate seal:
NOTE - AFFIDA	AVIT MUST BE NOTARIZED For L	ine (2) NOTE - AFFIDAVIT MUST BE NOTARIZED For Line (3)
Subscribed and s	sworn to before me	Subscribed and sworn to before me
this theda	y of, 20	this the day of, 20
(Signature	of Notary Public & Seal)	(Signature of Notary Public & Seal)
of	County.	ofCounty.
State of	·	State of
My Commission	Expires:	My Commission Expires

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR

(If an individual doing business under a <u>firm name</u>, use this sheet)

Name	of Contractor	trading	
1401116	Name of Contractortrading (Print individual name)		
Witness			
	and doing business as		
Print signer's name	and doing business as	(Print firm name)	
	44000000	·	
		(Address as Prequalified)	
	Signature of Contractor	(Individually)	
		Print signer's name	
NOTE - AFFID	AVIT MUST BE NOTARIZEI	2	
Subscribed and sworn to before me this the	1	NOTARY SEAL	
day of, 20			
G: CY (DIV)			
(Signature of Notary Public)			
ofCounty.			
State of			
My Commission Expires:			

Signature Sheet 3 (Bid) - INDIVIDUAL WITH FIRM NAME

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR (If an individual doing business in

his own name, use this sheet)

Name of Contracto	or
	(Print)
	(Address as Prequalified)
Signature of Con	tractor(Individually)
Witness	(Individually)
Print Signer's Name	Print Signer's Name
NOTE - AFFIDAVIT MUST	BE NOTARIZED
bscribed and sworn to before me this the	NOTARY SEAL
day of, 20	
(Signature of Notary Public)	
fCounty.	
tate of	
My Commission Expires:	

Signature Sheet 4 (Bid) - Individual Name

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR (If a partnership, use this sheet)			
(Print Name	of Partnership)		
(Address as	Prequalified)		
By			
Witness	Partner		
Print Signer's Name	Print Signer's Name		
NOTE - AFFIDAVIT I	MUST BE NOTARIZED		
Subscribed and sworn to before me this the	NOTARY SEAL		
, day of, 20			
(Signature of Notary Public)			
ofCounty.			
State of			
My Commission Expires:			

Signature Sheet 5 (Bid) - Partnership

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR

	(Limited Liability	Company, use this she	eet)
	Name of	Contractor	No. of the state o
	Name of Contractor (Print firm name)		
			(Address as Prequalified)
	:	Signature of Manager_	(Individually)
			(Individually)
			Print Signer's Name
			Find Signer's Ivanie
	NOTE - AFFIDAV	IT MUST BE NOTAR	UZED
Subscribed and sworn t	to before me this the		
day of	, 20	<u>NO1</u>	TARY SEAL
(Signature of N	Notary Public)		
of	County.		
State of	·		

Signature Sheet 6 (Bid) - LIMITED LIABILITY COMPANY

My Commission Expires:____

Contract No: C201320	
County: Haywood	
	ACCEPTED BY THE
	DEPARTMENT OF TRANSPORTATION
	Contract Officer
	Date
Execution of Contract and Bonds Approved as to Form:	
Attorney General	

DEBARMENT CERTIFICATION OF BIDDERS

Instructions & conditions for certification

- 1. By signing and submitting this proposal, the bidder is providing the certification set out below.
- 2. The inability of a bidder of provide the certification required below will not necessarily result in denial of participation in this contract. If the certification is not provided, the bidder must submit an explanation (exception) of why it cannot provide the certification set out below. The certification or explanation (exception) will be considered in connection with the Department's determination whether to award the contract. However, failure of the prospective bidder to furnish a certification or an explanation (exception) may be grounds for rejection of the bid.
- 3. The certification in this provision is a material representation of fact upon which reliance is placed when the Department determines whether or not to award the contract. If it is later determined that the bidder knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the Department may terminate this contract for cause of default.
- 4. The prospective bidder shall provide immediate written notice to the Department if at any time the bidder learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- 5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.
- 6. The bidder agrees by submitting this bid that, should the contract be awarded, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this contract, unless authorized by the Department.
- 7. The prospective bidder further agrees by submitting this proposal that it will include the Federal-Aid Provision titled "Required Contract Provisions Federal-Aid Construction Contract" (Form FHWA PR 1273) provided by the Department, without subsequent modification, in all lower tier covered transactions.

- 8. The prospective bidder may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals.
- 9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- 10. Except for transactions authorized under paragraph 6 of these instructions, if the successful bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the Department may terminate this transaction for cause of default.

DEBARMENT CERTIFICATION

The bidder certifies to the best of its knowledge and belief, that it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and
- d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective bidder is unable to certify to any of the statements in this certification, it shall attach an explanation to this proposal.

IF AN EXPLANATION, AS PROVIDED IN THE ABOVE DEBARMENT CERTIFICATION, HAS BEEN ATTACHED TO THE PROPOSAL, PLEASE CHECK THE BOX SHOWN BELOW:

An explanation has been attached to the proposal.